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# Report of the Forest Service

FISCAL YEAR 1998

*Conserving America's natural resources...*



*...the legacy continues*



United States Department of Agriculture

# USDA Forest Service

The Forest Service, U.S. Department of Agriculture, provides leadership in the management, protection, and use of the Nation's forests and rangelands. The agency takes an ecological approach to the implementation of multiple-use management, providing sustained yields of renewable resources such as water, forage, wildlife, wood, and recreation. The Forest Service has embraced ecosystem management as its operating philosophy and is committed to the preservation of wilderness, biodiversity, and landscape beauty as well as the protection of the basic resources of soil, water, and air quality.

The Forest Service is responsible for the 191.8-million-acre National Forest System, with its 155 national forests and 20 grasslands in 44 States, Puerto Rico, and the Virgin Islands. Also, the agency works with State land management organizations to help private landowners apply good natural resource management practices on their lands. The International Forestry program of the Forest Service enables the agency to share and receive technical expertise and managerial skills with other nations. The Research and Development (R&D) program of the Forest Service provides the best scientific information and management tools to maintain and restore ecosystem health and enhance productivity on all of America's forests for the long term. The R&D mission also includes a leadership role in international conservation by disseminating state-of-the-art knowledge and technology.

Key laws guiding Forest Service programs and activities are:

- Organic Administration Act of 1897.
- Clarke-McNary Act of 1924.
- McSweeney-McNary Act of 1928.
- Multiple-Use Sustained Yield Act of 1960.
- The Wilderness Act of 1964.
- National Environmental Policy Act of 1969.
- Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974, as amended.
- National Forest Management Act (NFMA) of 1976.
- Forest and Rangeland Renewable Resources Research Act of 1978, as amended.
- Cooperative Forestry Assistance Act of 1978.
- Chief Financial Officer's Act of 1990.
- Food, Agriculture, Conservation, and Trade Act of 1990 (Farm Bill).
- International Forestry Cooperation Act of 1990.
- Government Performance and Results Act of 1993.
- Federal Agriculture Improvement and Reform Act of 1996.

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# **REPORT of the FOREST SERVICE**

Fiscal Year 1998



# Selected FY 1998 Statistics

<b>National Forest System</b>	191.8 Million Acres
National Scenic Byways	7,700 Miles
National Wild and Scenic Rivers System	4,348 Miles Within National Forests
Insect and Disease Suppression	800,000 Acres
Wilderness	34.7 Million Acres
Watershed Improvements	38,497 Acres
Wildlife, Fish & TES Habitat Restored/Enhanced	378,855 Acres
Reforestation	287,900 Acres
Livestock Grazing Permitted	9.3 Million Head Months
Grazing Allotments Administered to Standard	4,113 Allotments
Energy Operations Processed	544 Operations
Bonded Non-energy Operations Processed	803 Operations
Timber Volume Offered	3.4 Billion Board Feet
Timber Harvested	3.3 Billion Board Feet
Road System	383,000 Miles
Landline Boundary System	249,058 Miles
 <b>State and Private Forestry</b>	
Forest Health Surveys & Evaluations	787.5 Million Acres (all ownerships)
Nonfederal Forestlands in the U.S.	487.6 Million Acres
Private Forestlands in the U.S.	393.0 Million Acres
Private Forestland Owners	9.9 Million
Woodland Owners Assisted	146,746
Rural Communities Using Local Strategic Plans	690
Participating Urban Communities	9,635
Hazardous Fuel Reduction	1,489,293 Acres
 <b>Research and Development Accomplishments</b>	2,718 papers and reports (includes books, papers, articles, reports, audio-visual materials, and other technical documents.)
 <b>Senior, Youth, and Volunteer Programs</b>	125,698 Persons Served

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# OVERVIEW

## Introduction

In 1881, the Division of Forestry was established by Congress in response to growing public concern over the future of America's forests. In 1901, the Division was upgraded to a Bureau within the U.S. Department of Agriculture (USDA). In 1905, the Bureau of Forestry was given management responsibility for the National Forest System (NFS), which now encompasses 191.8 million acres of forest, grass, and shrub lands. These lands are distributed among 46 States, commonwealths, and territories, as shown in Table 1 of the Statistical Appendix.

The Forest Service provides leadership in the protection, management, and use of the Nation's forest, grassland, and aquatic ecosystems. The agency's approach to natural resource management integrates ecological, economic, and social factors to maintain and enhance the quality of the environment to meet current and future needs of Americans. Through implementation of land and resource management plans, the agency ensures sustainable ecosystems and provides recreation, water, timber, minerals, fish, wildlife, wilderness, and aesthetic values on NFS lands for current and future generations.

Through technical and financial assistance, the Forest Service assists States, tribes, and private landowners in promoting good stewardship, rural economic development, and the improvement of the natural environment of cities and communities. The agency conducts research and development, providing the scientific information and technology that support the development of values, products, and services to maintain and enhance ecosystem health at home and abroad.

## Mission and Organization

The agency's mission is to ensure, for present and future generations, the long-term health, diversity, and productivity of the land. The phrase "Caring for the Land and Serving People" captures the essence of this mission. To accomplish this, the Forest Service employed about 40,000 people in 1998.

The Chief of the Forest Service reports to the Under Secretary for Natural Resources and Environment, USDA. Primary program responsibilities are divided among six Deputy Chiefs who report to the Chief, including: Research and Development (R&D), State and Private Forestry (S&PF), the National Forest System (NFS), Programs and Legislation (P&L), the Office of the Chief Financial Officer (OCFO), and Operations (OPS).

The National Forest System is managed for a wide variety of purposes and values. Activities include resource protection, restoration, and use. Management policies provide direction for land use intensities that range from wilderness preservation to intensive wood production and developed recreation.

The largest forest research organization in the world, R&D covers four broad areas: Vegetation Management and Protection; Wildlife, Fish, Watershed, and Atmospheric Sciences; Resource Valuation and Use; and Forest Resources Inventory and Monitoring. Each day, field foresters, land managers, farmers, ranchers, urban foresters, public interest groups, and many others apply the know-how developed by Forest Service scientists and partners in academia and industry. Long-term scientific research provides many of the tools used to monitor ongoing management practices and identifies new techniques.



The Forest Service is also responsible for maintaining and improving, through collaborative stewardship, the health and productivity of the Nation's urban and rural forests. This is accomplished through the S&PF programs which provide technical and cost-sharing assistance to help assure sound stewardship and use of the vast State and private forest lands. Utilizing nonregulatory approaches, S&PF also helps States, local, and tribal governments and small nonindustrial private forest landowners manage forest resources to meet economic, social, and environmental goals. Funds are leveraged through cost-sharing arrangements to provide increased on-the-ground project funding.

The Forest Service is also engaged in international collaborative activities to promote sustainable forest management domestically and throughout the world by increasing the sharing of knowledge and technology.

Three Deputy areas (Operations, Programs and Legislation, and the Office of the Chief Financial Officer) provide support services essential to accomplishing the agency's mission. The primary contribution of these Deputy areas is to ensure organizational effectiveness by providing legislative, financial management, and human resource support for the Washington Office and the field.

### **The Government Performance and Results Act**

The strategic and performance plans prepared under the Government Performance and Results Act (GPRA or Results Act) use a common set of goals, outcomes, and objectives that reflect the agency's mission and priorities. Both the Strategic and Annual Performance Plans were developed from the 1995 Draft Forest and Rangeland Renewable Resources Planning Act (RPA) Program. The following goals form the basis for these plans:

- Ensure Sustainable Ecosystems
- Provide Multiple Benefits for People Within the Capability of Ecosystems
- Ensure Organizational Effectiveness

These goals provide the basis for developing the program objectives and performance measures for the Annual Performance Plans. Within the agency's business model, the annual performance plan is intended to be the basic management tool for directing resources and budgets to specific programs and activities that move towards the longer-term goals or outcomes.

Although agency goals have not changed since the strategic plan was approved (September 30, 1997), the organizational structure of the objectives in all versions of the Fiscal Year (FY) 1999 and FY 2000 Performance Plans has been modified to reflect the latest agency thinking on how best to portray its mission. These modifications, while minor in scope, do constitute an interim adjustment to the strategic plan and previous versions of agency performance plans. Current efforts to identify, develop, and refine outcome-based land health performance measures will result in further evolution of the structure and content of the agency's revised strategic plan (due by September 30, 2000) and subsequent performance plans.

FY 1999 will be the first year the agency is required to submit an annual performance report under the Results Act. FY 1998 is considered a transition year and an opportunity to work towards a more comprehensive product for FY 1999.

# PERFORMANCE HIGHLIGHTS OF THE NATURAL RESOURCE AGENDA

## Background and Introduction

FY 1998 found the Forest Service at a pivotal point. The first Strategic Plan required by the Results Act had just been submitted to Congress at the close of FY 1997. The agency's 4-year experiment as a pilot in the reinvention effort was drawing to a close, with the first required performance plan not due until FY 1999.

Chief Dombeck celebrated his first year in office in 1998 by announcing what would become known as the agency's Natural Resource Agenda. While funding levels and program mixes had already been established for the fiscal year, line officers, program managers, and employees throughout the Forest Service began to consider and incorporate elements of the Natural Resource Agenda wherever possible. These elements are summarized in the following sections.

## Watershed Protection and Restoration

Watershed protection and restoration is vital to ecosystem health. Watersheds absorb rain and recharge underground aquifers. They serve as habitat for thousands of species of fish, wildlife, and rare plants. Properly functioning watersheds can minimize damage to lives, property, and streams from severe storms by absorbing runoff. Downstream communities depend on the clean water that flows from healthy watersheds for domestic use, food production, employment, power generation, and recreation.

Most national forest and grassland watersheds are functioning properly, supporting a variety of thriving ecosystems. In some areas, however, watersheds are deteriorating at alarming rates. Symptoms of poor health include declining water quality, alternating periods of flooding and drought, forests increasingly susceptible to insect and disease outbreaks, and decreasing populations of native fish and wildlife species.

Prior to 1897, 40 million acres of national forest were established primarily for watershed protection. In the Organic Administration Act of 1897, Congress directed that:

*"No national forest shall be established, except to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States."*

Over the years (primarily 1948-95) the focus on the Organic Act's provision for timber production has been clear. Less well understood by the public has been the agency's focus on watershed protection. The emphasis on watershed protection was both prophetic and well deserved. Today, the national forests contain over 1,000 municipal watersheds, and about 20 percent of the Nation's freshwater sources originate on national forest land.

The Natural Resource Agenda builds on this historical and legal foundation by making the maintenance and restoration of healthy ecosystems and watersheds a top priority. Based on sound science, the Forest Service will implement policies and strategies for restoring, protecting, and maintaining healthy ecosystems at the watershed level.

The critical issues now facing the Nation's watersheds include: invasion of exotic species, risk of severe and extensive wildfire, undesirable changes in vegetation, loss of species viability, degradation of aquatic ecosystems, excessive roading and poor road maintenance, air pollution, development on private land, and abandoned mines.

Under the premise that society's commodity needs cannot be met without securing the health of land and water resources, current and future generations depend on agency policies that address these issues. Watershed protection and ecological restoration will receive high priority in all decisionmaking processes, including budget and program planning, land management planning, project implementation, and watershed assessments for forest and interagency plans. Forest Service policy goals are to:

- Understand the relationship between land and water uses, watersheds, and ecosystem health within the context and limitations of applicable laws and existing treaties.
- Complete ecosystem analyses of NFS lands at the watershed level to determine existing conditions and potential landscape capability.
- Make land use allocations and project-level decisions based on sound scientific analyses and priorities for watershed restoration.
- Collaborate with all relevant parties and stakeholders to achieve healthy watersheds and ecosystems for current and future generations.

To realize this vision for healthy watersheds, the Forest Service will implement a nine-point strategy, using the best available science, in collaboration with States, local communities, other Federal agencies, and interest groups. Each point in the strategy will have quantifiable, measurable goals that will serve to focus our activities and keep the Forest Service accountable to the American people. Restoration needs assessments will determine the type, amount, location, and time of restoration work. In particular, the agency will involve local communities, generating ownership in the outcomes. The nine points include:

- 1) Making watershed management, including necessary watershed restoration, maintenance, and the acquisition of water rights in accordance with Federal and State laws, the highest priority in land management plan revisions.
- 2) Completing assessments of watershed conditions.
- 3) Restoring degraded ecosystems and attaining desirable vegetative conditions.
- 4) Working with other agencies, such as the Animal and Plant Health Inspection Service (APHIS), to prevent exotic organisms from entering or spreading in the United States, and to control existing pests.
- 5) Reconstructing, relocating, and decommissioning roads to help restore degraded watersheds.
- 6) Restoring degraded riparian areas.
- 7) Fully implementing by 2003 the Forest Health Monitoring Program established by Federal and State agencies to collaboratively monitor and report on the Nation's forest health.



- 8) Rebuilding populations of threatened, endangered, and sensitive species and conserving or restoring their habitats.
- 9) Encouraging communities to restore and maintain healthy watersheds through community programs.

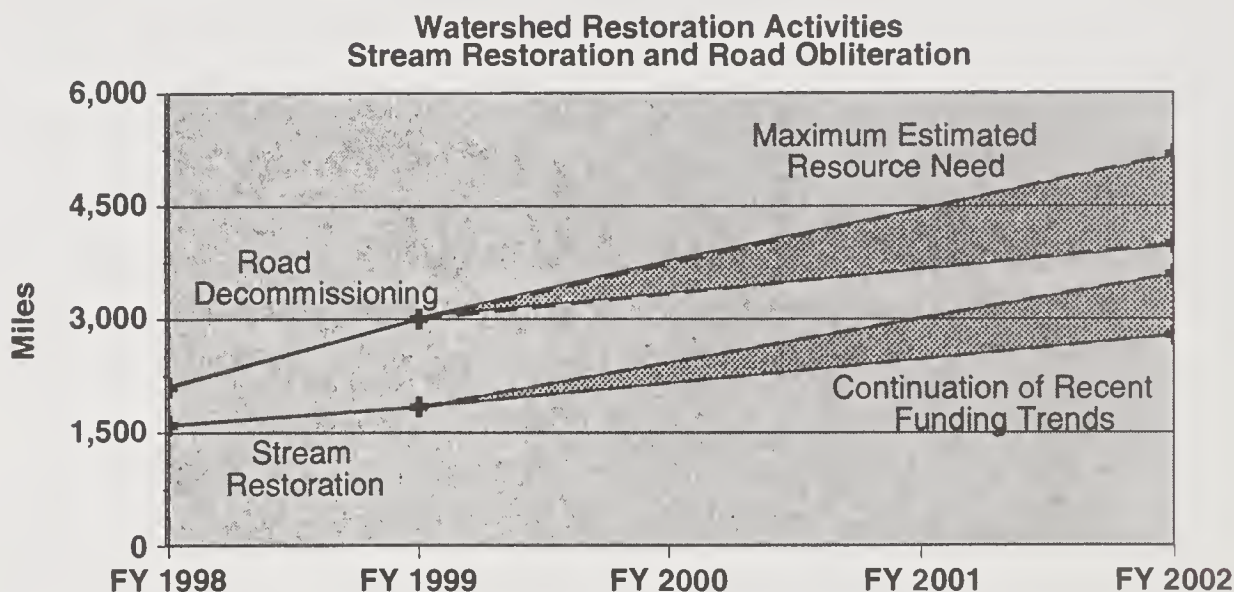
Results Act annual performance indicators and budget line items that most closely relate to these issues, concerns, and policy goals include:

<b>Performance Indicators</b>	<b>Budget Line Items</b>
Streams & lakes restored or enhanced	Inland Fisheries Habitat Management Anadromous Fisheries Habitat Mgt TE&S Species Habitat Mgt (aquatic)
Soil and water resource improvements Abandoned mine lands restored	Watershed Improvements Soil, Water and Air Operations
Road decommissioning and stabilization	Road Maintenance & Decommissioning
Wildlife habitat restored or enhanced	Wildlife Habitat Management TE&S Species Habitat Mgt (terrestrial)
Noxious weeds treated Nonstructural range improvements Grazing allotments analyzed & NEPA decisions signed	Rangeland Vegetation Management Grazing Management
Forestlands maintained by stand improvement	Forestland Vegetation Management
Hazardous fuel reduction	Wildland Fire Operations, Fuels Trtmt
Forest health surveys and evaluations Forest health monitoring	Forest Health Mgt, Federal Lands Forest Health Mgt, Cooperative Lands
Conservation agreements and strategies completed Recovery plans approved and implemented	TE&S Species Habitat Management  TE&S Species Habitat Management

Over time, the Forest Service's policy goals for healthy watersheds on the national forests will be attained when the short-term actions and programs described above collectively and cumulatively result in:

- Healthy, diverse, and resilient aquatic systems supporting a variety of conditions and benefits.
- Forest and grassland systems supporting all biological and physical components, functions, and interrelationships and their capability for self-renewal.
- Rangeland systems including robust riparian systems and a variety of conditions and benefits.
- Wildlife and fish populations that are abundant and thriving, rather than threatened, endangered, or sensitive.
- Watersheds providing the timing, quality, and quantity of water needed for beneficial uses and to sustain desired conditions.
- Soil that is productive enough in the long term to support healthy, diverse, and resilient terrestrial and aquatic ecosystems.

One of the primary purposes of this report is to monitor the agency's annual accomplishments in activities that lead toward these longer term outcomes. The following graph illustrates a range of possible performance levels for several key indicators. To address total resource needs in a timely fashion, the Forest Service should be operating at the upper levels shown in FY 2002. The lower line for each indicator illustrates what might be expected given recent Congressional appropriations. Future agency budget proposals will request funding that allows implementation at the higher (FY 2002) level as quickly as possible.



### Sustainable Forest Management

Sustainable forest management (SFM) has been a Forest Service goal, worded in one form or another, for decades. The concern today is to be more effective in the accomplishment of that goal by building a sustainable forest management framework into all phases of the agency's business.

Both the area of forestland and total volume of forest inventories (biomass) in the United States have stabilized and rebounded from their 1920 lows. Although the Nation's forests are generally healthy and productive, there are several areas of concern:

Hazardous fuel buildups (combustible forest materials)	Biodiversity loss	Exotic pests
Air pollution effects	Disturbance patterns	Riparian areas
Wildland-urban interface	Forest fragmentation	

The Natural Resource Agenda addresses the Forest Service commitment to sustainable forest management, including the specific concerns listed above. SFM refers to the management of the National Forest System and all of the Nation's forests in a way that meets the social, ecological, and cultural needs of people today without compromising the needs of people in the future.



Sustainable forest management requires the integration of environmental, social, and economic considerations in forest management. Taken as a whole, the agency's mission is designed to accomplish this. The Forest Service, however, is addressing sustainable forest management in several completely new ways. These are:

- promoting a common understanding of the 7 national-level criteria and 67 supporting indicators for sustainable forest management developed by the United States and 11 other countries, and endorsed in Santiago, Chile in 1995;
- working with partners to measure and assess trends in the social, biological, and economic condition of forests at the local, regional, and national levels, and making that information available to the public and decisionmakers;
- working in a collaborative stewardship way with other agencies (State and Federal), and nongovernmental organizations, to use resource condition trends and apply an ecosystem management philosophy.

To ensure accountability to the American people, the Forest Service will link performance by Forest Service managers to the framework of sustainable forest management. Specifically, the Forest Service will:

- Integrate SFM criteria and indicators into resource assessments, strategic plans, and associated analyses.
- Use indicators in annual performance plans that measure performance in terms of sustainable forest and rangeland ecosystems.
- Establish annual performance contracts so that top Forest Service managers are held accountable to the Chief for healthy ecosystems and link these contracts to our annual performance plans.

A majority of America's forests are privately owned (393 million acres). In addition, urban and rural communities depend on the national forests for a wide range of values and services. Both commodity and aesthetic resources are important to the quality of life in rural communities. Increased integration of economic, social, and ecological concerns is needed to enable rural communities and the Forest Service to work together on goals for sustainable development.

Results Act annual performance indicators and budget line items that most closely relate to urban and rural issues, concerns, and policy goals include:

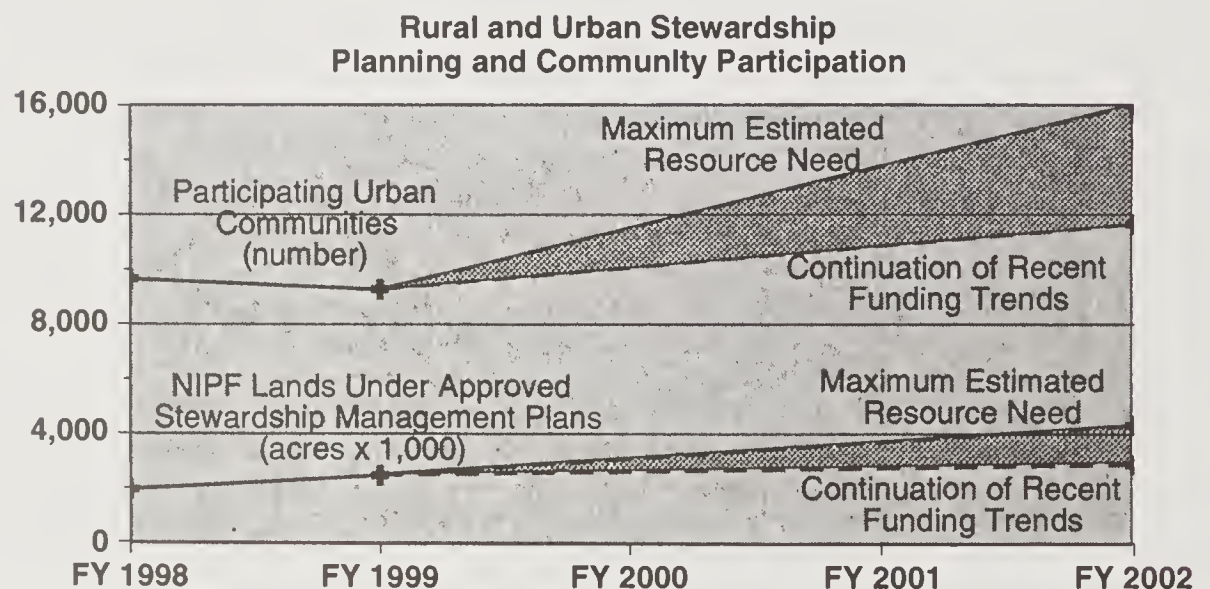
<b>Performance Indicators</b>	<b>Budget Line Items</b>
NIPF lands under approved Stewardship Management Plans	Forest Stewardship
Multiresource practices implemented on NIPF lands	Stewardship Incentives Program
Participating communities	Urban and Community Forestry
Communities working under broad-based local strategic plans	Economic Action Programs
Communities and/or volunteer fire departments assisted	Cooperative Fire Protection

Ensuring sustainable forests requires the involvement of communities that benefit from, and care for, these forests. Aside from the traditional commodity and recreation jobs resulting from healthy, productive forests, efforts to restore healthy forests can help to sustain rural communities by providing new job opportunities. The Forest Service will work with these communities to make sustainable forest management real in the lives of those who live and work in them. Specifically, the Forest Service will:

- Provide technical assistance to communities in the areas of locally based planning and stewardship.
- Encourage and assist individuals and communities to accomplish resource stewardship and conservation on an areawide or watershed basis.
- Promote environmentally sensitive economic development and jobs based on forest resources.
- Expand information, education, and outreach efforts to increase public awareness and understanding of SFM.

An additional concern is how to share with partners and communities the stewardship responsibility of SFM of both NFS lands and the Nation's private forest lands. New and different kinds of collaborative efforts are required at State, Federal, and local levels. Perhaps the most challenging task is helping to build diverse and stable communities while addressing concerns about the health of America's forests.

A main purpose of this report is to monitor the agency's annual accomplishments in activities that lead toward these longer term outcomes, including those on State and privately owned lands. The following graph illustrates a range of possible performance levels for several key indicators. To address total resource needs in a timely fashion, the Forest Service should be operating at the upper levels shown in FY 2002. The lower line for each indicator illustrates what might be expected given recent Congressional appropriations. Future agency budget proposals will request funding that allows implementation at the higher (FY 2002) level as quickly as possible.



## National Forest Road System

*"There are few more irreparable marks we can leave on the land than to build a road... Our overriding objective is to work with local people to provide a forest road system that best serves the management objectives and public uses of national forests and grasslands while protecting the health of our watersheds."*

-- Forest Service Chief Mike Dombeck, 1998

Almost all visitors to the national forests use forest roads. Roads not only provide access, but they also influence the type of experience for most forest visitors by determining where they will go and what they will see. Without roads leading to trailheads, even wilderness areas would be far less accessible.

Much of the existing forest road system was built over the last 50 years for timber harvest access. In the decades following World War II, traffic associated with timber harvest peaked about 1990. When timber harvests on the national forests declined in the 1990s logging traffic plunged to 1950 levels. Logging traffic now accounts for only one-half of 1 percent of all forest road use. By contrast, recreational road use has soared to 13 times its 1950 level.

**Vehicles Per Day on Forest Roads**

	1950	1990	1996
Timber harvest	14,000	42,000	15,000
Recreation	137,000	1,315,000	1,706,000

Driving for pleasure is the single largest recreational use on Forest Service managed lands, constituting 36 percent of all recreation there in 1996. In summer, recreational drivers on the national forests account for 13.6 million vehicle-miles per day. The outlook is for recreational road use to grow by 64 percent by the year 2045.

Few natural resource issues in recent years have attracted as much public scrutiny as the management of the forest road system. Though less costly to build and maintain than most public highways, forest roads can have adverse impacts on watersheds, especially if poorly maintained. Yet roads are needed for the goods and services that Americans expect from their national forests. Managers today must wrestle with several complicated issues:

Funding shortfalls. Roads that were originally built to accommodate logging trucks are increasingly carrying people seeking outdoor recreation opportunities. Eighty percent of system roads are not maintained to these higher public safety and environmental standards associated with the new type of use, primarily due to lack of funding.

Environmental damage. Poorly maintained roads can contribute to erosion and landslides, degrading riparian and wetland habitat through sedimentation and changes in streamflow and water temperature. Roads can also block fish and wildlife passage, and modify animal behavior.

Substandard roads. Many roads on the national forests do not meet the latest standards for safety and environmental protection. A complete inventory of substandard roads is needed to prioritize roads for improved maintenance, reconstruction or decommissioning.

Roadless areas. Of the 62 million acres of national forest land classified as roadless in the 1970s, 22 million acres have since been designated as wilderness, with 6 million acres still recommended for wilderness, pending Congressional designation. Of the



remaining 34 million acres released for other uses in Land and Resource Management Plans, about 9 million acres are suitable for timber harvest. One million of those acres have since been entered for timber harvest, and by definition are no longer roadless.

Because of the complex issues and strong public opinion regarding this subject, in FY 1998 the agency developed an Interim Rule for an 18-month suspension of road reconstruction and new construction in the remaining roadless areas, pending scientific study, agency review, and public comment.

Clearly a new approach to managing forest roads is needed. Sufficient funding is needed to restore necessary roads to a safe, environmentally sound condition, and/or to close and stabilize unnecessary roads and those that cannot be maintained. Any proposed activities in the relatively few remaining roadless lands need to be carefully evaluated. This new forest road emphasis in the Natural Resource Agenda will improve access for all forest road users while protecting healthy ecosystems through four primary actions:

- Determine the most effective way to provide all Americans with access to the national forests.
- Accelerate the pace of decommissioning unneeded and substandard roads that damage the environment.
- Selectively upgrade forest roads.
- Seek additional funding sources for the transportation system.

Results Act annual performance indicators and budget line items that most closely relate to these issues, concerns, and policy goals include:

<b>Performance Indicators</b>	<b>Budget Line Items</b>
System roads maintained to standard	Road Maintenance and Decommissioning
Roads reconstructed with appropriated funds	Roads Reconstruction and Construction

## **Recreation**

America's national forests and grasslands offer some of the greatest outdoor recreation opportunities in the United States. From downhill skiing at Vail, to backcountry expeditions into the Frank Church River of No Return Wilderness, to family outings on the national forests that surround California's 20 million residents, national forests provide an incredible range of outdoor opportunities.

Americans are visiting their national forests in growing numbers for life-enriching recreational experiences and for the spiritual renewal that accompanies them. In 1997, the Forest Service hosted an estimated 800 million recreation visits, more than any other jurisdiction or agency. Including skiing, hiking, camping, hunting, fishing, and pleasure driving, the national forests offer visitors:

- 4,348 miles of the National Wild and Scenic River System.
- One-third of the National Wilderness Preservation System.
- National Recreation Areas such as Mt. St. Helen and Hells Canyon.

- About 7,700 miles of Scenic Byways.
- About 133,000 miles of trails.
- Over 23,000 recreation facilities, including campgrounds, trailheads, boat ramps, picnic areas, and visitor centers, in addition to privately owned facilities on NFS land.
- 2.3 million acres of fishable lakes, ponds, and reservoirs.
- The window through which millions of Americans experience their wildland heritage and learn about the land.

Recreation on the national forests has an important economic dimension. The agency estimates that by 2000, economic activity associated with national forest recreation, including wildlife and fish related activities such as viewing, hunting, and fishing, will generate \$110.7 billion annually. In 1996, recreational fishing alone generated \$8.5 billion worth of economic value.

The Forest Service must also meet the Nation's growing need for outdoor recreation in a manner that protects the health, diversity, and productivity of the land. Over the next 50 years, demand is expected to go from 800 million to 1.2 billion visits to the national forests per year. In addition, people are asking for an ever broader spectrum of benefits and services to enrich their experiences. As the next millennium approaches, the agency will focus on several key areas:

- 1) improving the settings for outdoor recreation and enhancing visitor experiences,
- 2) guaranteeing visitor satisfaction with services and facilities,
- 3) reaching out to rural and urban communities to capitalize on the social and economic opportunities associated with recreation on the national forests,
- 4) improving access to information about recreation on NFS lands,
- 5) strengthening relationships with those who cooperate with the agency to improve outdoor recreation for all Americans, and
- 6) ensuring that recreation use does not impair the land's health.

A priority of the Natural Resource Agenda is to protect and restore the settings for outdoor recreation experiences that millions of Americans have come to expect and enjoy. The substantial facility maintenance backlog must be reduced while preserving and expanding the spectrum of outdoor recreation opportunities available.

Better coordination among program areas and better application of existing research will allow the agency to anticipate recreation trends and to identify the settings and experiences most valued by national forest visitors. For example, research can improve the accuracy of visitor estimates, identify changing patterns of demand, values, behavior, and satisfaction. This will be especially useful in locations with changing ethnicity, and in issues related to rapid technological advances. Research on barriers and conflicts in outdoor recreation will help managers improve environmental justice, reduce user conflicts, and enhance overall satisfaction. Specifically, the Forest Service will:



- Better utilize existing tools, such as the Recreation Fee Demonstration Program and partnerships to manage facilities.
- Prepare a land management planning guide for recreation, heritage, wilderness, and tourism.
- Select models and laboratories of excellence.
- Improve professional recreation management skills.

Today, information technology offers innovative ways of telling Americans about the rich recreation opportunities available. The Forest Service will tailor services to meet visitor needs, using tools such as the Internet to effectively reach targeted audiences, and improve the availability of information so visitors can better plan trips. The agency will also develop strategies to reach non-traditional audiences, such as inner-city youth.

The Forest Service will work closely with partners to give people recreational information and services when and where they want. Through cooperative projects such as the National Recreation Reservation Service, people will be able to obtain information and make reservations for a variety of locations and facilities from a single source or contact. Specifically, the Forest Service will:

- Use a strong marketing and research-based approach.
- Continue using the customer report card, third-party assessments, and other tools for continuous improvement.
- Improve agency presence on the World Wide Web.
- Establish an advisory group to the regional recreation directors.
- Charter a public-private consortium to help match information needs and resources.

Rural communities are diversifying their economic base and expanding their uses of the national forests and grasslands. Communities once solely dependent on timber production are now capitalizing on a wider range of goods and services. Research on communication tools, interpretive services, and environmental education, as well as on visitor spending patterns, will better describe and increase the contribution of recreation and tourism to rural development in and near national forests. Heritage and recreation tourism is also important to urban and suburban areas. The Forest Service will pay increasing attention to the needs of urban Americans and to their impact on the national forests, while providing a wide range of services, education, and experiences. Specifically, the Forest Service will:

- Collaborate with communities, the private sector, and other agencies.
- Encourage efficient delivery of recreation services.
- Showcase outstanding partnerships.

The key to success in outdoor recreation lies in strengthening and expanding working relationships. The Forest Service has long relied on partnerships to provide recreation opportunities. Just as the private sector has found ways to get the job done at a lower cost, the agency is learning that these partnerships enhance the quality of services.

Social science research will help identify ways that such partnerships can be improved and expanded. Closer ties with natural resource schools for curriculum development and continuing education partnerships will help maintain a cadre of professional and technical leaders at all levels of the agency. Cooperative efforts will also be expanded through our technology and development centers. Specifically, the Forest Service will:

- Help develop tourism conferences.
- Reestablish regional tourism program links.





## RESULTS ACT PERFORMANCE AND ACCOUNTABILITY REPORT

The performance indicators described in the following sections represent activities that contribute to understanding, restoring, and maintaining ecosystem health and biological diversity within the National Forest System (NFS), on State and nonindustrial private forest (NIPF) lands in the United States, and throughout the world. In most cases they are the same set of indicators listed under the corresponding objectives in the FY 1998-2000 annual performance plans. For ease of reference and consistency they are shown in the same order. Definitions of the performance indicators are included at the end of this report.

In most cases, annual progress toward longer term outcomes is portrayed by short-term output indicators. Final output levels for the associated performance indicators in FY 1998 are summarized along with a 3-year historical average. More detailed displays of funding and performance are shown in the Statistical Appendix. Indicators that most closely represent the four emphasis areas of the Natural Resource Agenda are highlighted in bold. Output and outcome indicators are being developed and refined in the context of *Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests*. Established as part of an international dialogue, this effort has since become known by the name of its host city as the Montreal Process.

### Goal 1: Ensure Sustainable Ecosystems

#### **Objective 1.1: Healthy, biologically diverse and resilient aquatic ecosystems restored and protected to maintain a variety of ecological conditions and benefits.**

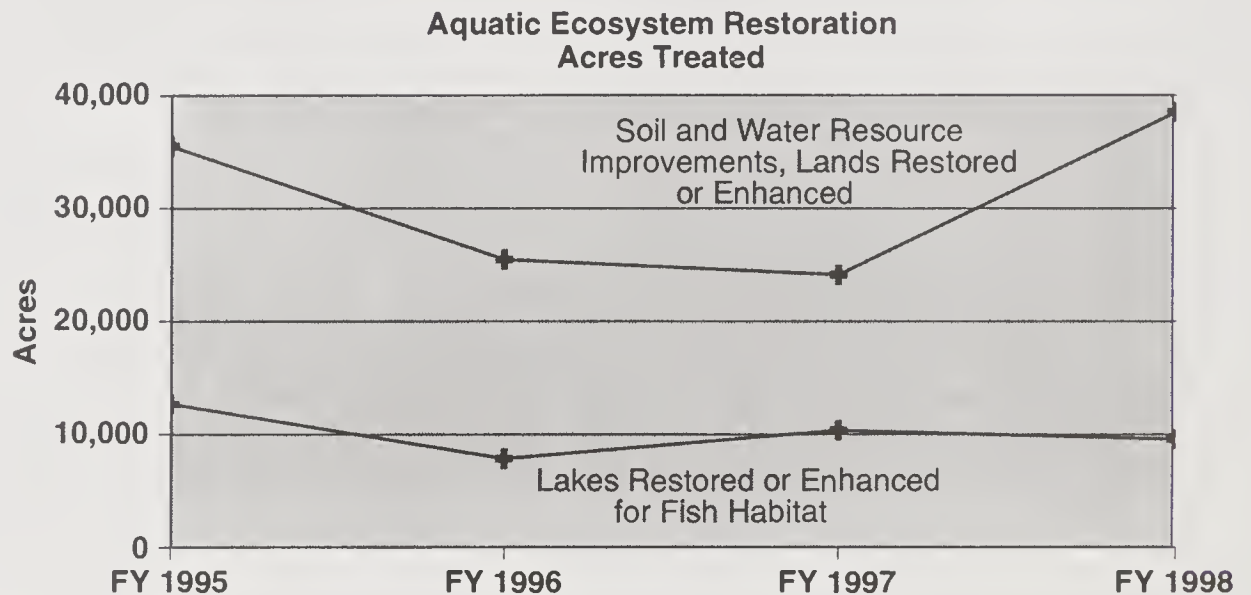
Aquatic ecosystems are dynamic, biological systems. The restoration and protection accomplishments under this objective show progress toward longer term objectives of resiliency and stability. Current conditions are known for about 60 percent of the aquatic ecosystems on NFS lands. Additional inventories of resource conditions conducted in FY 1998 will contribute to the accomplishment of management and restoration objectives.

Collectively these efforts help determine the best mix of investments and activities to employ in restoration work. This in turn leads to healthier aquatic ecosystems capable of providing quality water, biological diversity, quality recreation opportunities, and sufficient fish populations to meet subsistence and commercial needs.

Restoring watersheds improves ecosystem health in the immediate project area as well as downstream. Runoff control structures and revegetated areas on NFS lands (see following graph) help improve water quality and control erosion, leading to healthier, more diverse aquatic ecosystems. Stewardship planning and management practices implemented on nonindustrial private forestlands (NIPF) in FY 1998 also helped ensure that aquatic ecosystems were maintained and restored across all boundaries (see Table 10 in the Statistical Appendix).

Performance objectives for these NIPF lands focused on coordination and cooperation with similar efforts conducted by State forestry agencies, the Natural Resources Conservation Service, the Farm Service Agency, and the Cooperative State Research, Education, and Extension Service. Refer to Tables 5, 6, and 31 in the Statistical Appendix for related information. Stewardship Management Plans, based on landowners' objectives, were prepared by State forestry personnel or private forestry consultants, and then implemented by the landowners. Close coordination assures consistency between programs without overlap.

As an example of international cooperation, the Forest Service recently entered into a unique partnership with Ducks Unlimited to acquire, conserve, and restore wetlands and riparian habitat for migratory birds, waterfowl, and wetland wildlife in North America, Mexico, and Latin America.



The majority of fish habitat restoration and enhancement and soil and water improvement projects were completed by agency employees in FY 1998 (see Table 14). However, challenge cost-share agreements and other partnerships with State agencies and private groups such as Trout Unlimited greatly increased total accomplishments while improving relationships.

In the arid Southwestern United States, riparian habitats in the Middle Rio Grande Valley are stopover hotspots for birds such as the Wilson's Warbler as they migrate to and from the neotropical zone. Migration is extremely energy demanding and poses very high risks for the survival of these bird species. Research efforts now underway will help answer why bird populations are declining, and evaluate quality of the riparian areas as habitats for migration.

Resource managers need ways to assess watershed and forest health. However, it is costly and impractical to survey all species of plants and animals. Scientists are working on species of amphibians that are excellent indicators of ecosystem health. For the redwood forest of northern California, scientists found that the tailed frog and the southern torrent salamander are very sensitive to fine sediment infusions and may be excellent indicators of sediment impacts on streams.

Another bioindicator was developed by the Forest Service Southern Research Station to diagnose water quality based on the appearance of aquatic insects. The filamentous bacteria that normally colonize the gills and body of aquatic insects are stimulated into a bloom stage of growth when excess nutrients are present. In this stage, the bacteria can kill these aquatic insects. Field survey of this growth can be done with a 10-15X hand lens.



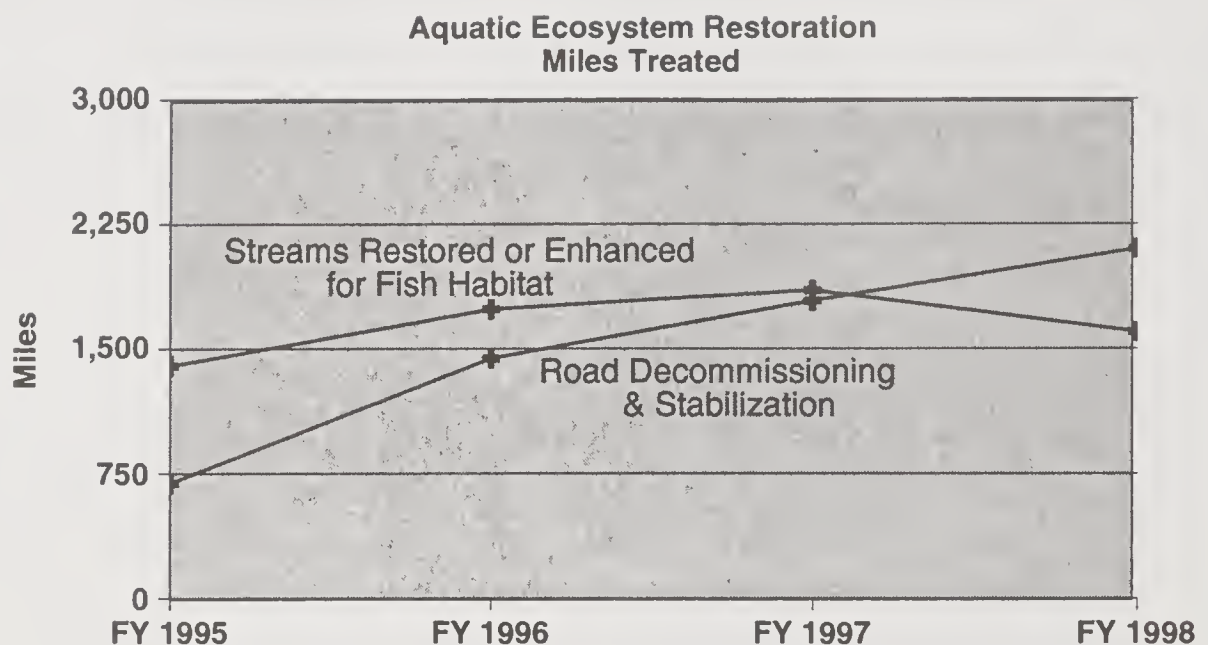
<b>Performance Indicators # (Agenda Items in Boldface)</b>	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
<b>NIPF lands under approved Stewardship Management Plans (acres)</b>	109,459	107,199	96,576
<b>Multiresource practices implemented on NIPF lands (acres)</b>	12,056 (FY1997 only)	12,056	12,500
<b>Streams and lakes restored or enhanced for fish habitat:</b>			
<b>a) inland stream miles</b>	979	950	911
<b>b) anadromous stream miles</b>	681	900	689
<b>c) Inland lake acres</b>	6,958	6,631	8,452
<b>d) anadromous lake acres</b>	3,337	3,713	1,086
<b>Soil and water resource improvements - lands restored or enhanced (acres)</b>	28,342	* 24,092	38,497
<b>Road decommissioning (miles)</b>	1,306	1,787	2,099
<b>Bonded nonenergy/energy operations administered to standard:</b>			
<b>a) number of operations</b>	7,586	7,833	7,651
<b>b) percent of operations</b>	50	50	72
<b>Abandoned Mine Land (AML) watershed initiative activities (non-CERCLA, see Objective 1.4)</b>	NA	NA	NA
<b>Land adjustments to improve National Forest management and protect natural resource values (acres)</b>	66,697	104,152	53,241

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final Management Attainment Reports (MAR) for FY's 1995-98.

\* Does not include approximately 22,000 acres of restoration/improvement associated with emergency supplemental funding received for floods/hurricanes in 1996-1997.

Substantial funding to implement the Abandoned Mine Lands (AML) Watershed Cleanup Initiative has been appropriated over the past 2 years. In FY 1998, \$4.6 million of agency watershed improvement funds were dedicated to the interdepartmental AML initiative. Over 38,000 abandoned and inactive mine sites exist on NFS lands. A great deal of planning and coordination with other Federal agencies, States, tribes, and interested stakeholders is needed to implement AML cleanups on a watershed basis. In FY 1998, inventory and assessment work was completed on the Animas River watershed in Colorado and a \$1.7 million contract was awarded to implement reclamation work at the Silver Crescent Mine on the Coeur d'Alene River watershed in Idaho. Other regions have initiated partnerships with the States and initiated inventory activities to develop information and proposals for projects in FY's 1999 and 2000.

In FY 1998 the multi-agency Natural Resources Performance Measurement Forum was formed and began to identify common outcomes and performance measures for physical and biological resources. The Forest Service and other Federal natural resource management agencies, such as the BLM, Fish and Wildlife Service (FWS), National Park Service, and EPA, began to identify roles, strategies, and responsibilities related to larger, Government-wide goals. One of the Forum's first efforts was to develop and recommend a set of outcome-based, agency-wide goals for clean water in support of the President's Clean Water Action Initiative.



In addition to decommissioning about 2,100 miles of road in FY 1998 (see Table 13), the agency also developed an Interim Rule for an 18-month suspension of road construction and reconstruction in many NFS roadless areas. After conducting 30 public meetings and reviewing over 60,000 public comments, an environmental assessment with 6 alternatives was completed and used to set the stage for a long-term roads policy.

Acquisition of land, either through exchange or by purchase, can provide protection for important resource values, such as critical habitat for TES wildlife species, and allow for more effective watershed management. Depending on the nature of the lands involved, acreages are also reported under Objectives 1.2 and 1.3. Opportunities to acquire important lands can occur with little advance notice, and willing sellers often expect a rapid response. To accommodate the needs of all parties, the agency has worked with conservation groups such as the Trust for Public Lands and the Nature Conservancy. In FY 1998, these efforts resulted in the acquisition of over 50,000 acres, including the following highly visible and significant sites:

The New World Mine (Montana) - Located within the Gallatin NF, this site was purchased to prevent development of a gold mine just outside the boundary of Yellowstone National Park. This acquisition helps ensure the sustainability of a highly significant ecosystem, and permits cleanup of past mine wastes.

The Columbia River Gorge National Scenic Area (Oregon and Washington) - Over 200 acres were added to this 115,000-acre national treasure which attracts nearly 5 million visitors each year. This continuing implementation of the comprehensive Land Acquisition Strategic Plan helps ensure that highly sensitive and vulnerable resources are identified and acquired.

The White Mountain Scenic Area (New Hampshire) - In FY 1998 Land and Water Conservation Funds were used to purchase 1,900 acres encompassing a large contiguous block of undeveloped lakeshore along four lakes and a nationally significant landmark involving the Appalachian Trail. Associated river and lake ecosystems are very sensitive, and with this purchase development pressures have been prevented.

**Objective 1.2: Ecological integrity of forested ecosystems restored or protected to maintain biological and physical components, functions and interrelationships, and the capability for self-renewal.**

The extent and severity of forest health problems are subjects of ongoing inventory, monitoring, and research across all ownerships (Tables 5-6). In the past few years, improved information has allowed the agency to refine treatment priorities, including efforts to reduce the build-up of combustible forest materials on NFS and private lands, reduce insect and disease threats, replant and improve forest stands, and prevent soil erosion. Around the world the Forest Service is working with developing countries such as Mexico, Brazil, and Indonesia to share understanding and knowledge of forest ecosystem restoration, thereby protecting the watersheds of which they are a part.

To help achieve a more integrated approach to this objective, the Ecosystem Management Corporate Team (EMCT) was created to address issues that cross deputy and program areas, such as sustainable development, invasive species, and the Clean Water Action Plan. In one of its many coordination efforts, the EMCT played a key role in the agency's hosting of the 1998 Sustainable Forest Management Roundtable in Washington, DC. Attended by Cabinet-level representatives of all Federal land management agencies and over 30 State, tribal, and county agencies and national industry and environmental organizations, this roundtable generated a commitment to sustainable forest management and the use of the Montreal Process Criteria and Indicators as the basis for common measures and protocols.

The Forest Inventory and Analysis (FIA) program is the agency's premier program for tracking ecological integrity and sustainability of all of the Nation's forests. Forest Service employees completed measurement of 6 percent of the existing 120,000 sample locations, and produced 87 publications documenting status and trends in land use change, species diversity, growth, mortality, removals (harvest), and ownership patterns. An annual inventory approach was implemented in 7 States in 1998, with the goal of implementing it in all States by the year 2003.

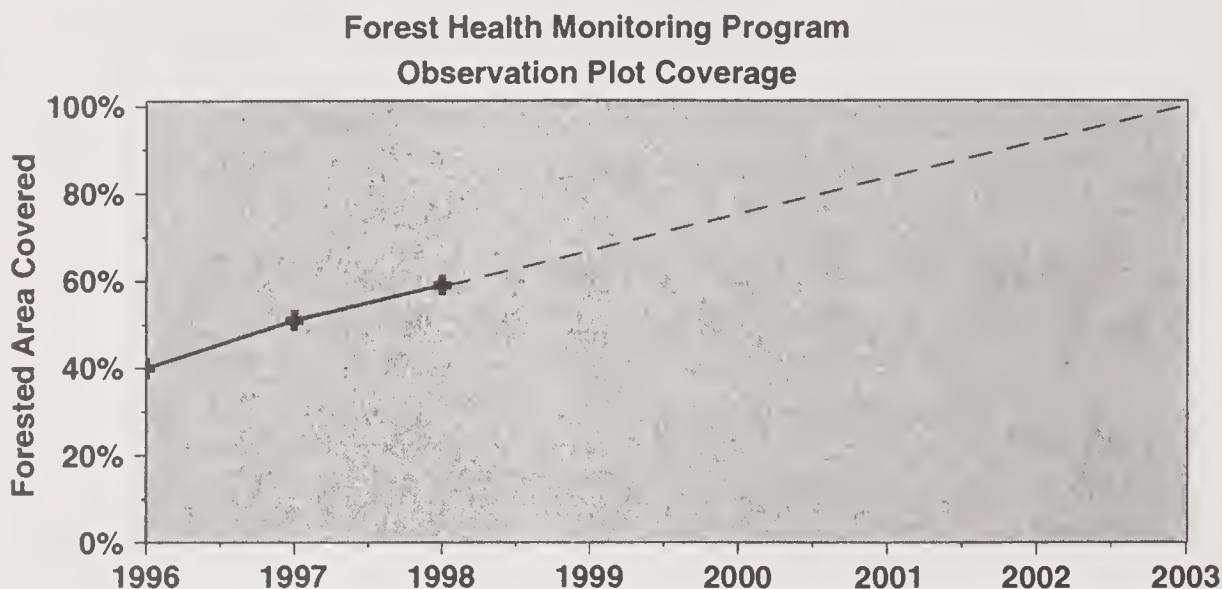
Long-Term Soil Productivity (LTSP) sites were recently established in Idaho and Oregon by the agency's Pacific Northwest, Intermountain, and Northern Regions at the Priest River Experimental Forest; Payette National Forest; Boise National Forest (tentative); and the Umpqua National Forest (satellite plots). These LTSP sites are the latest additions to an existing system of over 100 sites at 36 locations in the U.S. and Canada, and fill critical gaps in the national network. The LTSP is designed to develop monitoring protocols to help the national forests comply with the monitoring provisions of the National Forest Management Act of 1976 and ensure the sustainability of a basic component of forest ecosystems.

Insect and Disease detection and evaluation surveys were conducted on 213 million acres of Federal lands and 575 million acres of nonfederal State and private lands (see Table 5). These surveys provide a more complete and timely report on regional instances of declining forest health attributable to forest insects and diseases. Survey findings, recommendations, and advice about suppression needs and available alternatives were provided to land managers. The goal of 675 million acres was exceeded due to increased acres reported in the East on State and private lands.

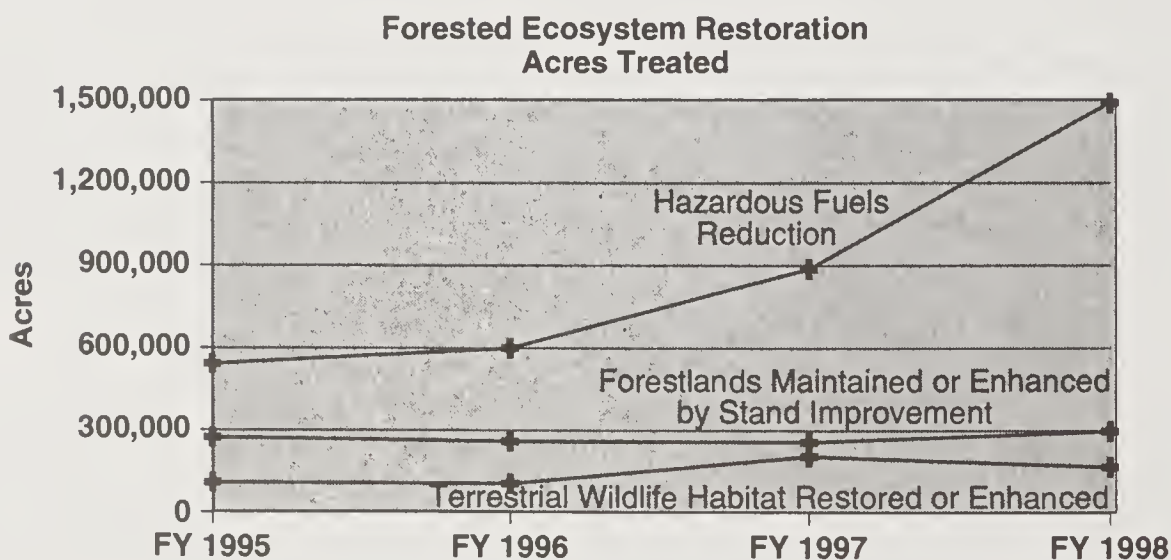
The Forest Health Monitoring Program's network of permanent observation plots was expanded to include the States of Illinois, North Carolina, Pennsylvania, South Carolina, Utah, and Wyoming. Fifty-nine percent of the forested area of the lower 48 States was monitored as part of this program, compared to 51 percent in 1997. This program,



conducted in cooperation with State forestry agencies, provides long-term trends in forest health for early detection and diagnosis of changes in conditions. Full coverage is expected by 2003.



Nearly 1.5 million acres of prescribed burning and other fuel reduction treatments in 1998 enhanced forest health and diversity by reducing wildfire intensity, protected vulnerable urban-wildland interface areas, promoted forage productivity, and restored fire-dependent ecosystems. Also in 1998 the Forest Service and Department of the Interior started the Joint Fire Science Program to provide better scientific support for fuel management activities.



Stand improvements (nearly 300,000 acres in FY 1998, see Table 20), such as precommercial thinning, have improved forest health by reducing stand density and allowing the remaining stand to grow more vigorously. More vigorous stands reduce the potential for insect and disease outbreaks and high-intensity fires, both of which impair forest health.

Wildlife habitat restoration and protection projects also contribute to healthy forests, and help ensure continued availability of those lands for terrestrial wildlife species. In the past year, using appropriated funds alone, the agency restored over 167,000 acres of terrestrial habitat, including the nearly 42,000 acres within rangeland ecosystems (see Objective 1.3). These efforts were enhanced by challenge cost-share efforts with groups such as the National Wild Turkey Federation (see Table 14 for total acreages).

Commercial timber harvests can be another tool used to improve and restore forest health. In FY 1998 the Forest Service removed and treated southern pine beetle infested forests through properly designed regular program and salvage timber sales. These efforts helped restore affected ecosystems to a healthy, vigorous condition.

Promptly reforesting NFS lands after timber harvest (nearly 290,000 acres in FY 1998, see Table 15) helps retain soil in place, prevents harmful stream sedimentation, provides cover for wildlife, and improves the resilience of ecosystems. Reforestation needs have declined in recent years, paralleling the decline in timber harvest over the same period.

Regeneration of longleaf pine in the Southern United States is a important productivity and biological diversity issue. At the time of early settlement by Europeans, this ecosystem covered an estimated 90 million acres. Less than 3 million acres still exist today. Over 30 plant and animal species associated with the longleaf pine ecosystem are threatened or endangered. Scientists recently published *Practical Guidelines for Producing Longleaf Pine Seedlings in Containers* (General Technical Report SRS-14, 1998), which will help achieve successful restoration of this tree species.

<b>Performance Indicators # (Agenda Items in Boldface)</b>	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
<b>Forest health surveys and evaluations, Federal and cooperative lands (acres)</b>	696,700,000	772,000,000	787,500,000
<b>NIPF lands under approved Stewardship Management Plans (acres)</b>	1,313,512	1,286,382	1,158,908
<b>Multiresource practices implemented on NIPF lands (acres)</b>	120,556	120,556	125,000
<b>Terrestrial wildlife habitat restored or enhanced (acres)</b>	104,797	154,550	125,413
<b>Forestlands maintained or enhanced by stand Improvement (acres)</b>	263,290	257,881	296,800
<b>Hazardous fuels reduction (acres)</b>	675,978	887,100	1,489,293
NIPF Stewardship Management Plans (number)	16,708	15,357	16,759
Lands restored by reforestation (acres)	355,358	321,498	287,900
Treatment of harvest related woody fuels - brush disposal (acres)	156,345	131,254	115,503
Land adjustments to improve National Forest management and protect natural resource values (acres)	88,929	138,869	70,911

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

Natural events, such as insect infestations and catastrophic fires, can have profound effects on ecosystem health. The impacts of future occurrences can be mitigated to varying degrees with appropriate prevention and control measures such as prescribed fire. In some cases, as with the American chestnut, mitigation may never be found. Several interagency efforts are successfully protecting forests and habitat from introduced insects and diseases.

The Forest Service, USDA's Animal and Plant Health Inspection Service (APHIS), and the Department of Commerce are working to prevent outbreaks and infestations by ensuring that logs, chips, and other wood products imported from overseas are not carrying insects, such as the Asian gypsy moth and Asian long-horned beetles. These insects can spread quickly in the United States because they have few natural predators, and cause significant economic, social, and ecological damage to urban, rural, and forest lands in North America, especially in areas adjacent to the east and west coasts.

Gypsy moth, southern pine beetle, dwarf mistletoes, and other insects and diseases were suppressed on 0.8 million acres of Federal and non-Federal land in FY 1998. The total acres treated decreased because of a drastic gypsy moth decline in the East and a decline in the southern pine beetle population in the South. The Slow-The-Spread pilot project in Michigan, North Carolina, Virginia, and West Virginia demonstrated that gypsy moth spread can be reduced by more than 60 percent along the leading edge of the infested area.

Financial assistance for implementation of Slow-The-Spread projects was provided to Federal agencies, including the Forest Service, Department of the Interior, Department of Defense, and to States for treatments that were shown to be economically, biologically, and environmentally sound. These suppression actions protected trees and timber, wildlife habitat, water quality, and recreation values as well as human health and safety.

Thirty-six Special Technology Development Projects (STDP) and National Agricultural Pesticide Impact Assessment Program (NAPIAP) projects were funded to develop, improve, and demonstrate new technologies, materials, methods, and strategies to improve the efficiency of forest pest management. These projects included the use of biological controls to limit the spread of noxious weeds and exotic insects, pest risk modeling, enhanced aerial surveys technology, and data visualization technology.

As detailed in Table 26 of the Statistical Appendix, 200,357 acres of national forests and grasslands were treated with pesticides in the past fiscal year. This acreage represents a decrease of 33 percent in the treated acreage from the previous year. The majority of the pesticides applied were for the management of forest vegetation (conifer and hardwood release and control), disease control in tree nurseries, native and exotic weed management, and predator control on rangeland.

**Pesticide Treatments - Fiscal Years 1996-98**

Fiscal Year	1996	1997	1998
Acres Treated	220,290	297,880	200,357

Nonindustrial private forest landowners control nearly 60 percent of productive forest land in the United States, but less than 10 percent of them have written forest management plans (see Table 10). By providing assistance in multiresource planning and management on non-Federal forest lands, the Forest Service is enhancing forest health across the entire landscape.



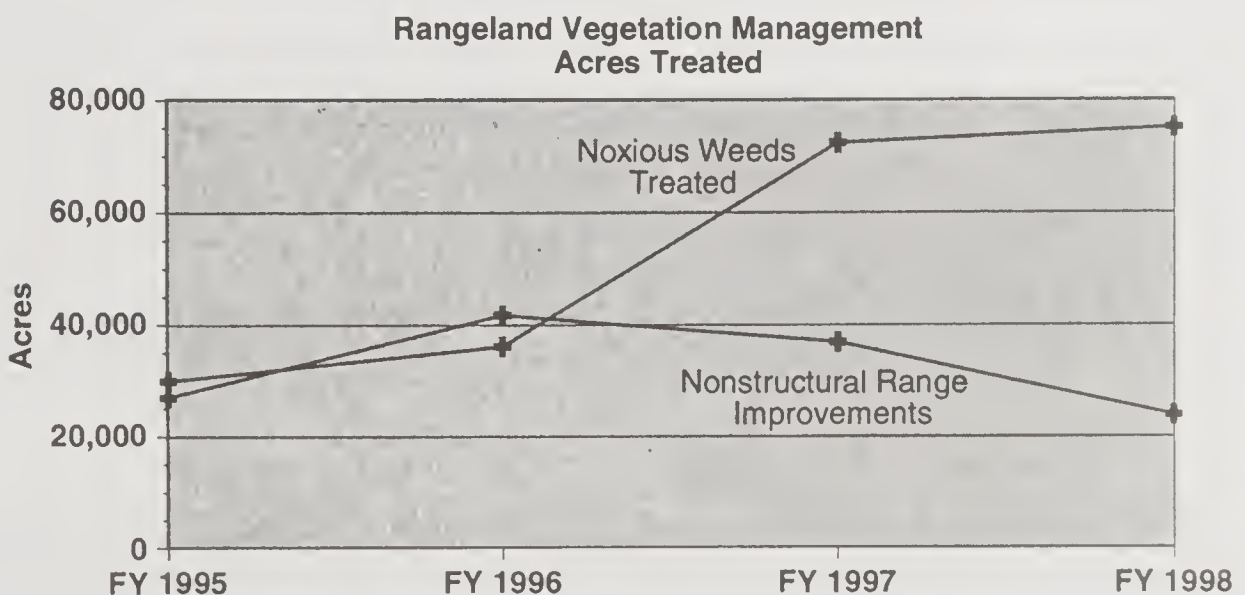
The Cooperative Forestry programs involve close coordination with Federal, State, local, and tribal government organizations and private landowners. Since Federal dollars are matched by State contributions, even small increases in Federal funds result in important on-the-ground accomplishments. For example, the Forest Service contributed \$2 million to the Mountains to Sound Greenway project in which the State, environmental and industry groups, and other Federal agencies are working to acquire conservation easements from Seattle across the Cascades to ensure that the lands are protected.

The majority of the 30 areas purchased with Land and Water Conservation Funds in FY 1998 are forested lands with a wide variety of significant resource values. Depending on the nature of the lands involved, acreages are also reported under Objectives 1.2 and 1.3. One example is a 550-acre purchase along the Big Sur coastline located in the Los Padres National Forest of California. This parcel is one of the most scenic along the world-renowned coastline, and complements the nearly 5,000 acres acquired over the past 5 years. The area also provides habitat for 12 wildlife species identified on Federal or State threatened or endangered lists.

**Objective 1.3: Healthy, diverse, and resilient rangeland ecosystems restored and protected to maintain robust riparian systems, a variety of ecological conditions and benefits, and biodiversity.**

Healthy rangelands provide habitat for many plant and wildlife species and forage for commercial use. Where they adjoin streams, rangelands support riparian species--including many listed as threatened or endangered. Although public rangelands are in better condition than they were at the turn of the century, an estimated 20 million acres of NFS rangelands do not meet forest plan standards or require further analysis to determine their status.

In FY 1998, the agency restored about 1 percent of those areas needing improvement, thus allowing them to support native and desirable nonnative plant species. The Forest Service improved approximately 24,000 acres of rangeland with nonstructural treatments such as seeding, fertilizing, and liming.



Approximately 6-7 million acres of NFS lands are now infested with noxious weeds such as Russian thistle, salt cedar, leafy spurge, and kudzu. These invasive species are spreading at a rate of 8-14 percent annually, for a conservatively estimated increase of 480,000 acres each year. Through the Invasive Alien Species Noxious Weed Strategy, the agency developed an action-oriented control program in conjunction with adjacent landowners and managers, and other stakeholders. In compliance with environmental analyses and decisions, over 75,000 acres were treated in FY 1998.

The agency's objectives for managing rangelands are diverse, ranging from enhancing grassland bird habitat to maintaining forage for domestic livestock. These objectives rely on research to guide location of range fencing to help restore riparian habitat or native vegetation. Research also focuses on the factors affecting rangeland health, including timing and duration of grazing by livestock and wildlife, recreation use, weather patterns, and development of gas, oil, and mineral resources.

<b>Performance Indicators #</b> (Agenda Items in Boldface)	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
<b>Noxious weeds treated (acres)</b>	46,136	72,357	75,138
<b>Nonstructural range improvements completed (acres)</b>	35,186	36,856	23,817
Rangelands monitored for progress toward desired condition in AMP's (acres)	8,290,266	7,351,098	5,632,233
<b>Terrestrial wildlife habitat restored or enhanced (acres)</b>	34,932	51,517	41,804
Land adjustments to improve National Forest management and protect natural resource values (acres)	66,697	104,152	53,241

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR reports for FY's 1995-98.

The agency leverages funds through programs such as grazing permittee construction or implementation of improvements, grazing fee credits on national grasslands, and challenge cost-share projects. USDA, DOI, and State rangeland managers have developed multi-State and multijurisdictional noxious weed management plans (e.g., the Greater Yellowstone Area), worked with local highway departments to spray road rights-of-way across jurisdictions, researched biological control methods, and prepared educational materials and training courses. This has helped the individual partners use funds more efficiently, leverage other resources, and reduce duplicative efforts.

In FY 1998, four program reviews related to Objective 1.3 were conducted in five regions. The key findings related to the NEPA analysis process for grazing allotments, grazing resource management planning and inventory, and wildlife program accountability.

#### **Objective 1.4: Healthy, diverse, and resilient aquatic and terrestrial resources restored and protected through hazardous substances site response.**

Through the agency's work and cooperative efforts, land and water resource conditions were restored and protected through hazardous substance site responses under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

HAZMAT site cleanup improves water quality, increases recreation opportunities, and restores fish and wildlife habitat. The Forest Service estimates there are 1,800 HAZMAT sites on NFS lands that will require cleanup action. Last year, the agency completed 68 response actions at hazardous substance sites, a 30-percent increase over FY 1997.

<b>Performance Indicators #</b> (Agenda Items in Boldface)	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
<b>Hazardous substance sites *</b>	57 (FY97 only)	57	
- <b>Sites characterized</b>			43
- <b>Cleanups completed</b>			25
Watershed or major Abandoned Mine Land (AML) site cleanup actions initiated under CERCLA (see Objective 1.1 also)	NA	NA	1

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

\* Prior to FY 1998 site characterizations/cleanups were reported as a combined total.

Preservatives used to prolong life of wood used in outdoor applications can eventually end up in soils and streams. To prevent future problems, Forest Products Laboratory scientists are using preservative-tolerant fungi and bacteria as biotreatment of waste wood to reduce the volume going to landfills, and to recover wood fibers for recycling. Research and Development (R&D) also works to identify microorganisms that can help remediate polluted soils and wastewaters.

The agency is developing partnerships and securing additional funds by leveraging resources from Federal, State, tribal, and local governments; nongovernmental organizations; and potentially responsible parties. The Forest Service has worked with these partners to implement a multiagency abandoned mine lands initiative. In FY 1998, they prioritized the sites that need remediation, and they accelerated efforts to clean up and reclaim sites. This has been successful in western watersheds where CERCLA and non-CERCLA sites pose ecological and safety dangers.

**Objective 1.5: Populations of threatened, endangered, and sensitive species are conserved through recovery and management efforts.**

Recovering and conserving federally proposed and listed species, and agency-designated sensitive species are fundamental, legal responsibilities of the Forest Service. The existing and future welfare of threatened, endangered, and sensitive (TES) species is a key indicator of NFS aquatic, forest, and rangeland ecosystem health. Improving conditions for these plant and animal species, including the reintroduction of natural patterns of disturbance and other ecological processes, also benefits many other wildlife and plant species.

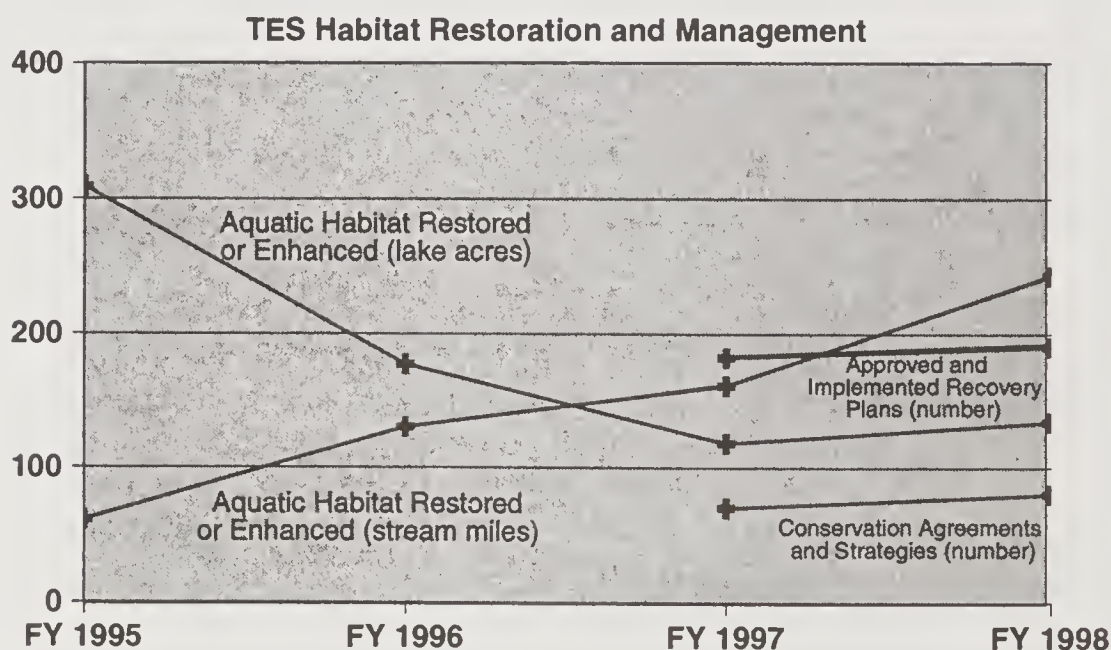
The agency supports R&D programs to better understand TES habitat needs and the complex interrelationships within the biotic and abiotic components of the environment. Understanding the habitat relationships and requirements for individual TES species is critical for managers charged with developing and implementing conservation and restoration projects. Monitoring TES populations and habitat components in project areas is essential to understanding impacts and revising practices to be more effective.



In FY 1998, about 3 percent of the identified sensitive species had a conservation agreement and/or strategy completed to guide resource management efforts. Approved threatened and endangered species recovery plans were implemented for 190 species. The Forest Service continues to restore TES habitat and ensure that agency actions do not jeopardize federally listed species or their critical habitat.

<b>Performance Indicators #</b> (Agenda Items in Boldface)	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
<b>Terrestrial TES habitat restored (acres)</b>	83,948	122,280	201,966
<b>Aquatic TES habitat restored or enhanced</b>			
a) stream miles	117	161	245
b) lake acres	201	118	134
<b>Conservation agreements and strategies (number of sensitive aquatic and terrestrial species)</b>	70 (FY97 only)	70	80
<b>Approved and implemented recovery plans (number of listed aquatic/terrestrial species)</b>	182 (FY97 only)	182	190

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98; Wildlife, Fish and Rare Plants Database, 1998. Refer to Table 14 in the Appendix for accomplishments by region.



Red-cockaded woodpeckers, an endangered species, are found in open pine forests of the Southeast. The Forest Service, Department of Defense, FWS, State agencies, tribal governments, and private individuals are jointly protecting and enhancing critical habitat in these coastal plain and piedmont ecosystems.

Since Hurricane Hugo in 1989, recovery has focused on reestablishing birds in abandoned habitats. Working with the Department of Energy and Savannah River Natural Resources Management and Research Institute, agency scientists have developed a mobile aviary to allow "soft" release of captured birds into target habitats.

In February 1998, a severe windstorm on the Angelina and Sabine National Forests in Texas damaged critical habitat. Rapid consultation with the FWS and response from local groups helped the agency rehabilitate the blowdown area quickly.

**Objective 1.6: Better ecosystem management decisions based on the best available scientific and management information.**

In FY 1998 the R&D program continued to develop and provide managers with scientific and technical information needed to manage and sustain the forest and range lands of the Nation. Activities emphasized values, products, and services that would maintain and enhance ecosystem health at home and abroad.

Development of the Natural Resource Information System (NRIS) continued under auspices of the Ecosystem Management Corporate Team (EMCT) and the Interregional Ecosystem Management Coordination Group. Key milestones included production and testing of corporate data base prototypes for air, vegetation, and terrestrial modules of NRIS. Planning was initiated for water, fauna, and human dimension modules. Common data standards and delivery systems are being developed to generate information for planning, analysis, decisionmaking, and management of forests and grasslands. Key indicators are shown in the following table.

Forest Service R&D has a diverse portfolio that addresses the key land management issues of Federal lands and provides intellectual leadership worldwide. The Criteria and Indicators for Sustainable Forest Management provide a framework necessary to assess resource conditions over multiple ownerships. A multiagency group is developing common data standards and protocols to ensure consistent implementation and use. By completing integrated inventories and ecological assessments, researchers provide managers with the latest information about existing forest and rangeland conditions, potential resource capabilities, and demand.

The year 1998 also marked the 50th anniversary of the H.J. Andrews Experimental Forest in Oregon. A historical analysis of continuous research, including 700 scientific citations from the last decade, showed many long-term benefits to understand how "healthy" ecosystems function as well as results that help land managers make near-term decisions. This collaborative research effort has included the Willamette National Forest and Oregon State University.

The publication of *Fire's Effects on Ecosystems* (John Wiley and Sons, Inc.) in 1998 has already helped scientists, managers, and decisionmakers evaluate the impacts of fire on soil, water, vegetation, riparian, air, and social components of ecosystems. This book synthesizes information from the last 20 years of research into a format accessible as a reference to planners, decisionmakers, managers, and technicians.

As described in Objective 1.2, the gypsy moth continues to be a serious exotic invasive pest. In 1998 agency scientists published their work leading to the discovery and patent of a strain of virus that attacks the gypsy moth, but that is benign to humans and other organisms, setting the stage for commercial production. Compared to chemical and biological agents currently used to control gypsy moth, this new method has little or no environmental impact.

Performance Indicators #	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
Scientific papers (number)	2,089	1,872	1,192
<i>Ecological Assessments Completed</i>			
Ecoregion (Domain/Division/ Province) Scale		3	3
Eco-subregion (Section)/ RiverBasin/SubBasinScale		22	15
Landscape/Watershed Scale		142	105
<i>Terrestrial Ecologic Unit Inventories</i>			
Eco-subregion (Section, Subsec) Scale (acres x 1000)		1,993	166,652
Landscape Scale (acres x 1000)		8,262	52,497
Land Unit Scale (acres x 1000)		4,747	7,660
<i>Aquatic Ecologic Unit Inventories</i>			
Riverine Valley Segment Scale (miles)		16,461	13,824
Riverine Stream Reach/Channel Unit (miles)		2,810	2,369
Lacustrine Lake Type Scale (acres)		5,659	16,088
Lacustrine Lake Zone/Site Scale (acres)		1,117	9,352
<i>Biological Inventories</i>			
Forest Resource Inventory (acres x 1000)		34,961	13,802
Rangeland Resource Inventory (acres x 1000)		1,906	735
Wildlife Habitat Inventory (acres x 1000)		1,968	2,113
TES Species Habitat Inventory (acres x 1000)		3,300	2,679
<i>Human Dimensions</i>			
Heritage Inventory (acres x 1000)		1,178	816
Air Quality Related Values Inventoried/Monitored (AQRVs)		521	809

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

For more than 70 years, the Forest Service has conducted an inventory and analysis of forested lands in the United States (FIA). This data base is routinely used by Federal land managers, States, private industry, and international groups. The natural resource information developed through research and the status information developed by inventory and monitoring efforts are crucial in the development of Forest Service policy, programs, and revision of land and resource management plans, helping to ensure that ecosystem health and productivity are maintained.

An annual inventory system is being implemented for the 13 States in the South. The annual forest inventory system provides the basis for integrating the Forest Health Monitoring and the FIA programs. Components of this system include: plot strategies, field logistics, use of remote sensing, models, quality assurance, and data base management.



**Objective 1.7: Naturally functioning wilderness ecosystems where conditions are determined primarily by natural forces.**

With almost 20 percent of NFS lands designated as wilderness, the National Wilderness Preservation System plays a key role ensuring sustainable ecosystems. The major purpose of the congressional wilderness designation is to protect and preserve the natural, "wilderness" character of the designated area while allowing opportunities for solitude and primitive and unconfined outdoor recreation (see Objective 2.1). As much as possible, natural ecological processes are allowed to operate without intervention. As such, wildernesses serve as laboratories where conditions are determined primarily by natural forces, providing a basis for assessing the effects of changes induced by land management practices, pollution episodes, and other human-induced events.

The Forest Service ensures that NFS lands with congressionally designated wildernesses and their associated ecosystems are influenced primarily by natural processes and protected from human-caused degradation. To help ensure this, in FY 1998 the agency acquired four parcels within existing wildernesses totaling over 300 acres in the States of Colorado, Minnesota, New Mexico, and Utah.

<b>Performance Indicators #</b>	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
Wilderness covered by approved fire plans (acres)	50,000 (FY97 only)	50,000	45,000

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

Increasing use of wilderness areas, together with human activities and development pressures outside of wilderness, creates stresses that threaten the enormous biological and societal benefits derived from these areas. Managers struggle to understand these threats, and to protect and restore natural conditions and opportunities for wilderness experiences. To do so they rely on the results of rigorous research on wilderness ecosystem character, the biological and social impacts of human activities, the role of wilderness in larger social systems, and the impact of different policy and management alternatives.

There continues to be broad support among natural resource agencies for this type of wilderness training, education, and research. In FY 1998 the Forest Service, BLM, National Park Service, and FWS jointly trained employees and conducted research at the Arthur Carhart National Wilderness Training Center and the Aldo Leopold Wilderness Research Institute.

A recent product of the Institute, *Stewardship Across Boundaries* (Island Press, 1998), presents a framework for understanding administrative boundaries and effects. It deals with human, ecological, social, legal, and institutional aspects of boundaries around wilderness, private, recreation, and public lands. This book helps managers become more involved with users and individuals beyond their own boundaries.

In FY 1998, the Forest Service also continued its work with the Department of Defense, Federal Aviation Administration, and DOI to address overflight issues that may threaten wilderness values and resources. This effort is coordinated through the Interagency Airspace/Natural Resources Coordination Group.





## Goal 2: Provide Multiple Benefits for People within the Capabilities of Ecosystems

### Objective 2.1: Quality recreation experiences with minimal impacts to ecosystem stability and condition.

Americans cherish their public lands for values that the Forest Service manages--wilderness, clean water, forest products, protection of rare species, old-growth forests, and a connection with their history. Americans also want a great deal from the agency in terms of recreation settings, experiences, activities, facilities, and services, and they will expect even more in the future. FY 1998 saw recreation continue to emerge as the fastest growing use on the national forests and grasslands.

This national heritage of forests and grasslands has provided special places for generations of Americans. With help from partners and through revenue enhancement tools, the Forest Service offered a rich array of activities and adventures unparalleled in scope and diversity. Although spanning the entire Recreation Opportunity Spectrum, the agency's unequalled recreational niche continued to be the "wild" end of "wildlands" experiences. It managed 63 percent of the National Wilderness Preservation System in the contiguous United States and a much larger percentage of wilderness experiences. It administered 4,348 miles of the Wild and Scenic Rivers System; 412 units of the National Wilderness Preservation System; 133,000 miles of trails; more than 250,000 heritage sites; and over 23,000 campgrounds, picnic areas, trailheads, boat ramps, and visitor facilities.

Recreation is one of four emphasis areas in the Natural Resource Agenda, which also highlights recreation benefits and four critical focus areas: settings and experiences, service and satisfaction, community connections, and relationships. In FY 1998, the agency developed *A Strategy for Recreation* that tiered from the Natural Resource Agenda and began to implement the focus area items.

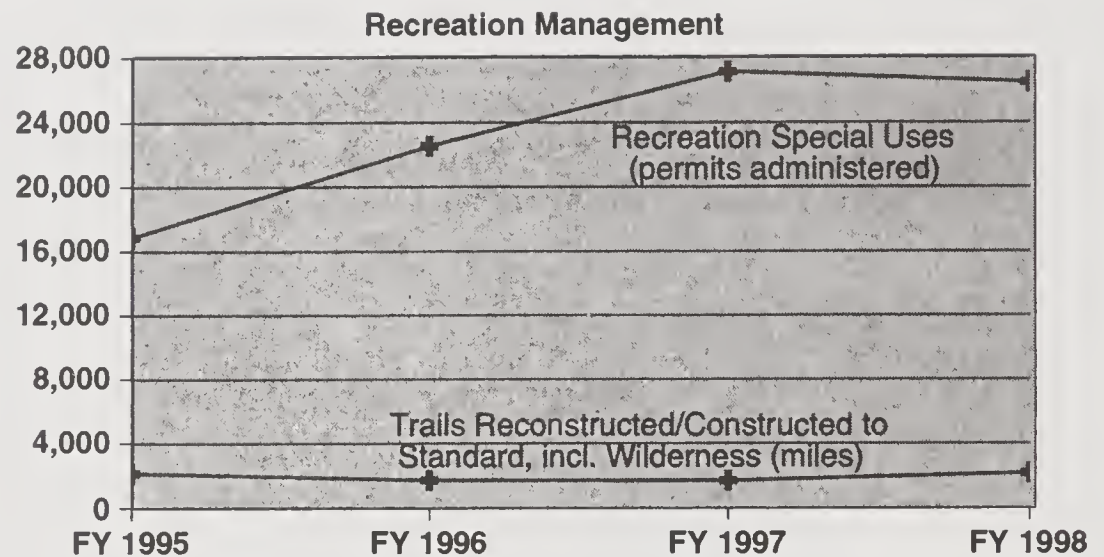
The enjoyment of scenery is central to recreation experiences--people come for the natural settings and quality landscapes found in the NFS. The agency began development of the *Built Environment Image Guide* to further enhancement of settings and experiences and establish a Forest Service brand of recreation.

Through the use of expanded technology, delivery of high-quality service and satisfaction was addressed through implementation of the interagency National Recreation Reservation Service (NRRS). The service featured "one-stop shopping" for more than 20,000 Forest Service and U.S. Army Corps of Engineers recreation facilities and activities at 700 locations nationwide.

The agency began development of sustainable and community-supported tourism opportunities that support natural and cultural resources stewardship. Community connections improved as the agency worked at becoming a better partner through use of customer satisfaction surveys to evaluate Forest Service efforts and the satisfaction realized by communities.

Recreation special uses, including outfitter, guide, and concessionaire operations, add diversity to the Forest Service's recreation program. Activities provided under special use permit are often those that the agency does not otherwise offer. In 1998, the Forest Service enhanced relationships and focused on steering rather than rowing through successful efforts to reengineer and streamline the recreation special uses application process. Eighty percent of program delivery at campgrounds and other recreation facilities was accomplished through private sector concessionaires. The agency administered more than 26,000 recreation special use permits in 1998.





While use at developed recreation sites is increasing, the condition of recreation facilities has continued to decline. During 1998, the agency reviewed and assessed the total backlog of recreation deferred maintenance for developed sites, trails, heritage structures, and water systems. Meaningful measures provided the Forest Service with consistent quality data to determine the 1998 deferred maintenance backlog of \$1.7 billion. Reconstruction and repair of this backlog better serves national forest recreation users. Fees generated through the Recreation Fee Demonstration Program helped slow the rate of backlog growth. On NIPF lands, the agency helped to meet demands by helping owners complete stewardship management plans.

Performance Indicators # (Agenda Items in Boldface)	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
<b>NIPF lands under approved Stewardship Management Plans (acres)</b>	109,459	107,199	96,576
<b>Multiresource practices implemented on NIPF lands (acres)</b>	12,056 (FY97 only)	12,056	12,500
Seasonal capacity available (million PAOT-days*)	171.1	193.8	201.0
Annual wilderness & "Leave No Trace" education contacts (total number)	500,000 (FY97 only)	500,000	500,000
Trails reconstructed to standard:			
a) wilderness	367	335	430
b) nonwilderness	1,469	1,339	1,720
Recreation special uses administered (permits)	22,171	27,130	26,459

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

\* PAOT-days are calculated by multiplying site capacity times the number of days per year the site is open to the public.

Volunteers in the Senior, Youth, and Volunteer Programs contributed work valued at \$25.2 million on recreation-related projects in FY 1998. This represents 66 percent of the total work contributed by the 98,271 volunteers in the program.

On Forest Service and DOI lands, the "Leave No Trace" program provides users with guidance on respecting nature and how to enjoy recreation and wilderness values while preserving them for future users. This information is consistent across agency boundaries, and meets the Year 2000 National Performance Review goal of "one-stop shopping" to provide better service to the public.

In FY 1998, the WO Recreation, Heritage, and Wilderness Resource Staff conducted three program reviews of the Recreation Fee Demonstration Program in Regions 5, 6, and 9. In Region 5, major findings included the need for more effective communications with recreation users to address low compliance and fee protests. The key Region 6 finding related to the number of fee projects in the Region and the public confusion with so many different fees--a team is now working on better fee coordination. In Region 9, major findings related to employee safety and cash security, and both issues have since been addressed.

**Objective 2.2: Protected and restored heritage resources that are available for the education and use of current and future generations.**

Heritage resources located on national forest lands provide many benefits to the American people, including key connections to the Nation's historic and prehistoric past. These resources include the physical remains of prehistoric and historic cultures, locations of cultural or religious significance, written records, and oral histories. Public interest in heritage tourism is increasing through public educational experiences and opportunities. Heritage sites have been and will continue to be instrumental in helping researchers and managers answer questions about changes in climate, vegetation, society, and ecosystems over time.

Collaborative efforts have been critical to the success of the Forest Service's Heritage Resource Program. Close coordination with individual State Historic Preservation Offices (SHPO), tribal governments, and the Advisory Council on Historic Preservation will continue to occur at the national forest level.

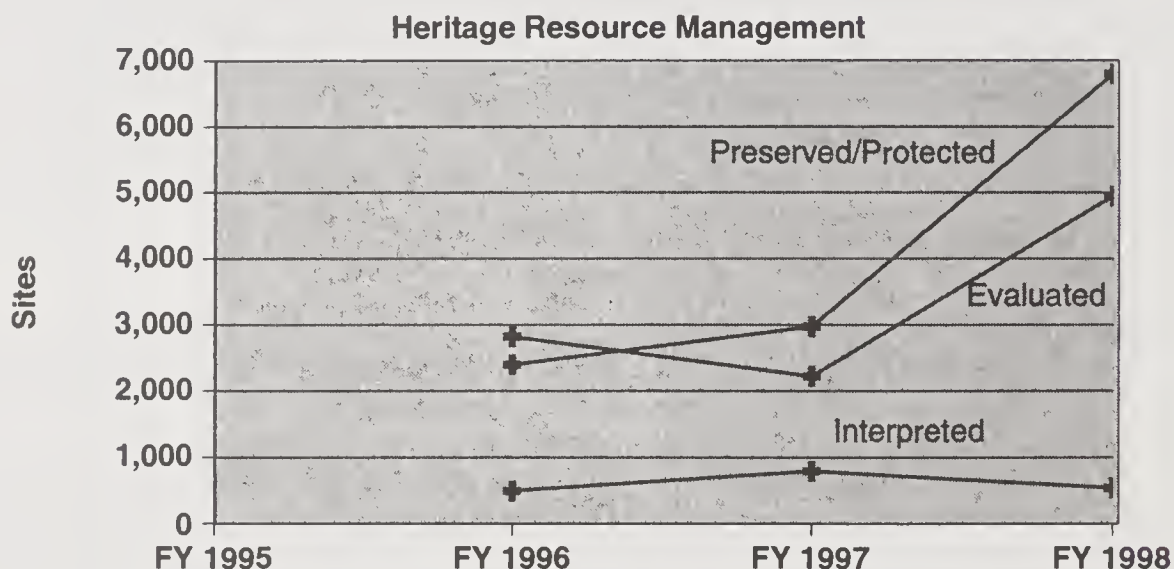
Heritage inventories of NFS lands continued to identify sites for future scientific evaluation, protection, and interpretation efforts.

Performance Indicators #	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
Heritage sites preserved/protected	2,681 (FY96-97)	2,968	6,795
Heritage sites evaluated	2,518 (FY96-97)	2,219	4,945
Heritage sites interpreted	717	793	538

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

In FY 1998, volunteers contributed 70,000 hours of work in evaluating and interpreting heritage sites. Volunteer programs allow the agency to leverage limited funds and complete important projects. University partnerships and Passport in Time (PIT) volunteer outreach projects continue to build support for the Heritage Resources Program and an awareness of the inherent value of heritage resources.

Designating sites on the *National Register of Historic Places* requires collaboration and coordination between individual SHPO offices, the Forest Service, and the National Park Service. In FY 1998, a total of 887 sites were so designated.



**Objective 2.3: Improved urban environments and enhanced community livability through healthy landscapes.**

S&PF's Urban and Community Forestry (U&CF) program provides leadership in protecting, managing, and improving urban forest ecosystems for nearly 80 percent of the Nation's population, who live in 45,000 towns and cities. The U&CF program helps local communities recognize the value of their forests, builds capacity to manage community forest resources, and supports community vitality through public involvement, commitment, and action.

The Forest Service, in partnership with State forestry agencies, provides technical and financial assistance to local governments and nonprofit organizations. In doing so, the program is an effective link between an array of governmental and private resources and grassroots organizations to raise and address natural resource related environmental issues at community, county, State, regional, and national levels. Intense public interest in the program is evidenced by the annual participation of approximately 10,000 communities and people from 7,000 volunteer organizations in the program. The number of requests for Federal assistance and grants is eight times greater than the capacity of the existing program.



<b>Performance Indicators #</b> (Agenda Items in Boldface)	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
<b>Participating communities (number)</b>	10,110 (FY97 only)	10,110	9,635
Technical assists to communities (number)	NA	NA	10,325
Training provided (hours)	NA	NA	1,455,000
Volunteer assistance generated (hours)	NA	NA	2,319,000

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final PMAS for FY's 1995-98.

Volunteer involvement is helping to accomplish urban forest management projects while expanding public knowledge of agency programs. Private sector support and involvement is another strategy that holds promise for expanding and improving the urban forestry program. In any given community, many organizations need to be contacted to determine their interest in participating or funding urban forestry activities. These education efforts build support for the program, and are directed at community members as well as within the Forest Service and State forestry agencies.

The U&CF program is an integral part of the Administration's Urban Resources Partnership (URP) Initiative. Involving six Federal agencies, State and local governments, and non-profit organizations in the underserved communities of large urban areas, this initiative has allowed the Forest Service to provide funding and technical assistance to urban forest education and restoration efforts in Atlanta, Chicago, New York, Seattle, Denver, East St. Louis, Las Vegas, Los Angeles, Philadelphia, San Francisco, Buffalo, Boston, and South Florida. The Federal Government has invested \$9.5 million since 1994, and leveraged an additional \$14 million in funding and community labor. Federal and local agencies provided 26,000 hours of technical assistance to 310 projects.

The URP program also provides national leadership in delivering and demonstrating state-of-the-art urban ecological assessments, using GIS and other new technologies. Grants which allow towns and cities to develop their own capacities for protecting and improving their natural environments have recently been awarded to Atlanta, Canton/Akron, Chesapeake Bay (MD/VA), and Puget Sound (WA) communities, Los Angeles, New York City, and the Highlands region of New Jersey and New York.

In FY 1998 one field review was conducted of the URP program. Key recommendations resulting from that review include:

- Improve evaluation and documentation of projects or their components to ensure full compliance with authorities of the funding agencies;
- Improve consistency of matching costs, i.e., the valuation and appropriateness of costs for type of service rendered;
- Eliminate cash advances outstanding beyond the 30-day maximum time limit;
- Improve the project field data and supporting information to enable better decisionmaking;

- Improve project file documentation;
- Guard against situations that could be perceived as conflicts of interest; and
- Provide additional training in program authorities and administration of grants and agreements to URP coordinators and Forest Service/NRCS representatives to local steering committees.

**Objective 2.4: Economically healthy and diversified rural communities operating under strategic plans for sustainable development.**

Through the Economic Action Programs (EAP's) of S&PF, the Forest Service strengthens rural communities and increases investments in sustainable development. Rural community assistance programs target resource-dependent rural areas experiencing economic problems, enabling them to diversify their economies and enhance their quality of life. The Forest Service helps to bring communities together to develop broad-based local strategic plans and solve resource, economic, and social challenges.

In the past year, the Forest Service provided technical and financial assistance to help more than 2,500 rural communities strengthen, diversify, and expand their local economies, improve transportation networks, and increase access to technology. Examples are summarized in Tables 30-32.

The Forest Service has shared technologies, programs, and funding with the USDA's Natural Resources Conservation Service (NRCS) for many years. Last year both agencies worked with the National Endowment for the Arts to provide rural communities with Forest Service landscape architects to support Resource Conservation Development areas. Landscape architects worked with rural communities on projects ranging from locating bicycle trails to designing recreation sites and improving aesthetic values.

<b>Performance Indicators #</b> (Agenda Items in Boldface)	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
<b>Communities working under broad-based local strategic plans (number)</b>	496	538	690
Communities using locally based measurements systems (number)	151 (FY97 only)	151	269
Assistance to tribal & minority communities (number)	150	132	175

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

In FY 1998, a joint review was conducted of EAP's in Region 9 and the Northeastern Area. The review found that these units are effectively combining financial assistance to help communities and organizations generate positive economic and social outcomes. Several States have demonstrated innovative and effective mechanisms to document project outcomes.

More involvement is needed among groups representing nonconsumptive and nonwood forest products, and rural and urban communities are being encouraged to network more. Coordination between State and Federal natural resource planners and State economic development planners needs to be strengthened. Title VI civil rights compliance and outreach should be improved. Sustainability measures should be linked with criteria and indicators in monitoring EAP outcomes.

**Objective 2.5: A sustainable yield of forest products that contributes to meeting the Nation's demands and to restoring, improving, or maintaining forest ecosystem health.**

National forests are the primary source of timber from Federal lands. They supplement the role of private lands, and reduce potential fluctuations in the Nation's timber supply. Today, national forest timber sales are designed to incorporate multiple objectives, including insect and disease prevention and control, wildlife habitat management, fuels treatment, and reconstruction or construction of roads needed for long-term access.

<b>Performance Indicators #</b> (Agenda Items in Boldface)	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
<b>NIPF lands under approved Stewardship Management Plans (acres)</b>	656,756	643,191	579,454
<b>Multiresource practices implemented on NIPF lands (acres)</b>	96,445 (FY97 only)	96,445	100,000
Timber volume offered (million cubic feet)	682.1	761.8	645.8
Timber volume sold (million cubic feet)	613.1	790.6	591.6

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

As documented in Tables 33-38 of the Statistical Appendix, the Forestland Management program provides wood for American consumers, jobs and income to local communities, and other tree and special forest products in demand by the public.

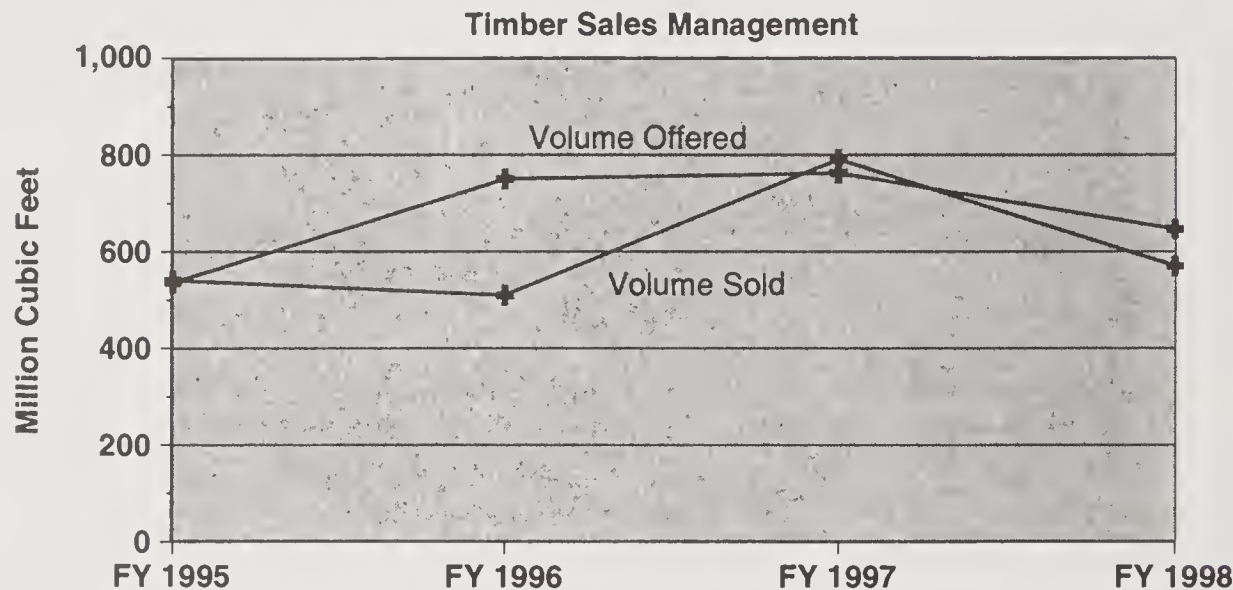
The revised and improved *Wood Handbook*, Agricultural Handbook No. 72, has just been published. There have been other revisions since the original handbook was first issued in 1935. This popular handbook provides engineers, architects, and others with properties of wood and how to use wood efficiently in construction.

The demand for softwood sawtimber is projected to grow, and the role of NIPF landowners is expected to increase. Technical and financial assistance to NIPF landowners interested in timber management helps meet national demands for wood products and provides sustained supplies while supporting healthy ecological conditions. Timber management research contributes to local, regional, and national economies and supports improvements in technology and product diversification.

By working with managers of NIPF lands, timber sale layout and design conducted under approved Stewardship Management Plans is more ecologically sound. As NIPF lands provide an increasing percent of the Nation's timber supply, the need to provide proper planning and timely assistance is becoming more crucial.



In California, the Forest Service is participating with DOI agencies, and local community, industry, and environmental organizations in the Quincy Library Group. This coalition has developed a strategy that provides for multiple goods and services on NFS lands, including commercial thinning and fuel reduction. Through these kinds of collaborative efforts, timber harvesting opportunities and resource improvements can be successfully accomplished together.



In FY 1998, the Forest Management Staff conducted four program reviews and one unannounced audit in four regions focusing on timber sale preparation, harvest administration, timber theft prevention, and timber sale appraisals. Key findings included:

- timber accountability audits have not been completed to standard by some field units;
- some timber theft prevention and bid monitoring plans do not meet standards;
- security and accountability of tracer paint does not meet standards by some field units;
- the WO should provide the field with better direction on and training in suspension and debarment; and
- the transaction evidence appraisal system needs to be incorporated into some Regional Appraisal Handbooks.

Action Plans were finalized based upon the specific findings of each of these reviews, and implementation of the recommendations is currently in progress.

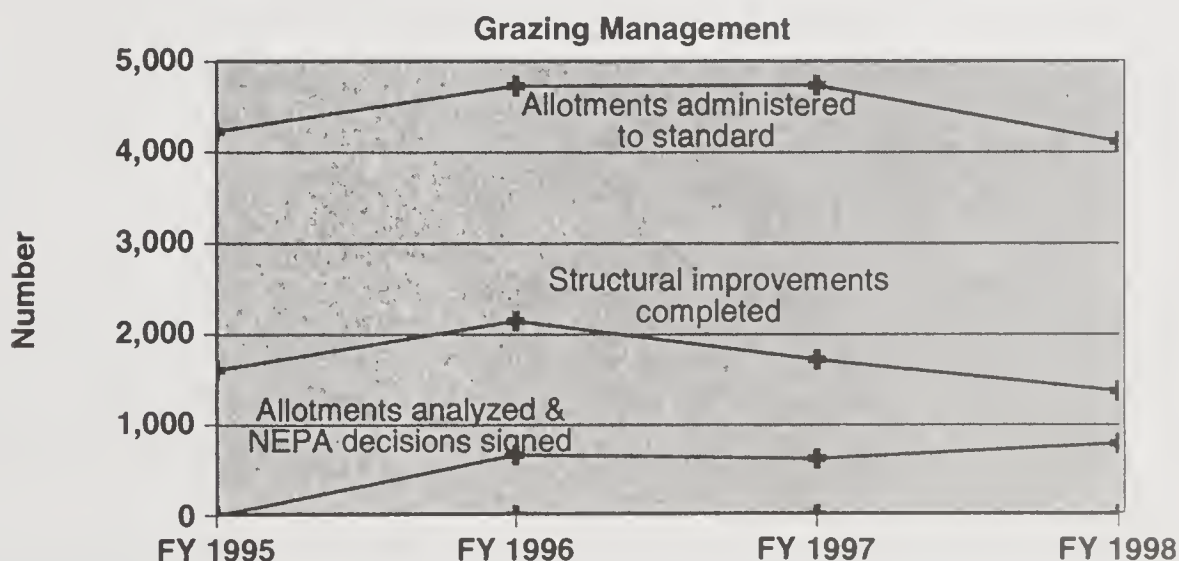
**Objective 2.6: A sustainable supply of forage on suitable and capable lands for livestock and wildlife.**

Seventy percent of the area within active grazing allotments on NFS land meets or is moving toward land and resource management plan objectives that result in healthy, native populations of wildlife, aquatic, and TES species. A key mechanism in this process is the scheduled NEPA analysis of many allotments leading to strategies, projects, and management guidelines that will improve forage conditions on public lands. Approximately 800 decisions based on these studies were signed in FY 1998.

<b>Performance Indicators # (Agenda Items in Boldface)</b>	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
<b>Grazing allotments analyzed and NEPA decisions signed (number)</b>	643	621	790
Range Structural improvements (number)	1,822	1,718	1,370
Allotments administered to standard (number)	4,564	4,735	4,113

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

Customer service is an important part of the range management program and it has a direct bearing on the agency's ability to accomplish other performance outputs, such as allotments managed to standard. Levels of grazing use in FY 1998 are displayed in Tables 39-40.



As more energy is directed toward allotment analysis, field personnel presently have less time available to construct new improvements, or to properly administer existing allotments. When these studies are completed and decisions are implemented, the emphasis will shift back to physical range improvements and an increase in the number of allotments administered to standard.

In FY 1998, the Forest Service, FWS, BLM, local agency officials, tribal leaders, and citizens worked with the States of Arizona and New Mexico to develop a natural resource conservation and community development strategy that includes an analysis of grazing issues. Through these efforts, the participants are working to maintain grazing in upland areas while increasing protection for TES species habitat in streamside zones. This collaboration on providing forage while protecting habitat is improving overall sustainability of southwestern rangelands.

In FY 1998, one program review related to this objective was completed in Region 6, focusing on grazing resource management planning and inventory. Results of this review included a plan for accelerating progress toward meeting planned accomplishment goals for signed NEPA decisions. A team approach, including both regional office and forest personnel, was designed to help achieve this.

**Objective 2.7: Available mineral resources that comply with environmental and health standards.**

Exploration, development, and production of energy and minerals on NFS lands contribute to economic growth, create jobs in rural communities, and raise revenues for the U.S. Treasury and the States. Related energy production levels are shown in Table 41. The agency is ensuring that minerals activities are conducted in an ecologically acceptable manner by completing NEPA analyses in a timely fashion, monitoring operations, and implementing related research findings.

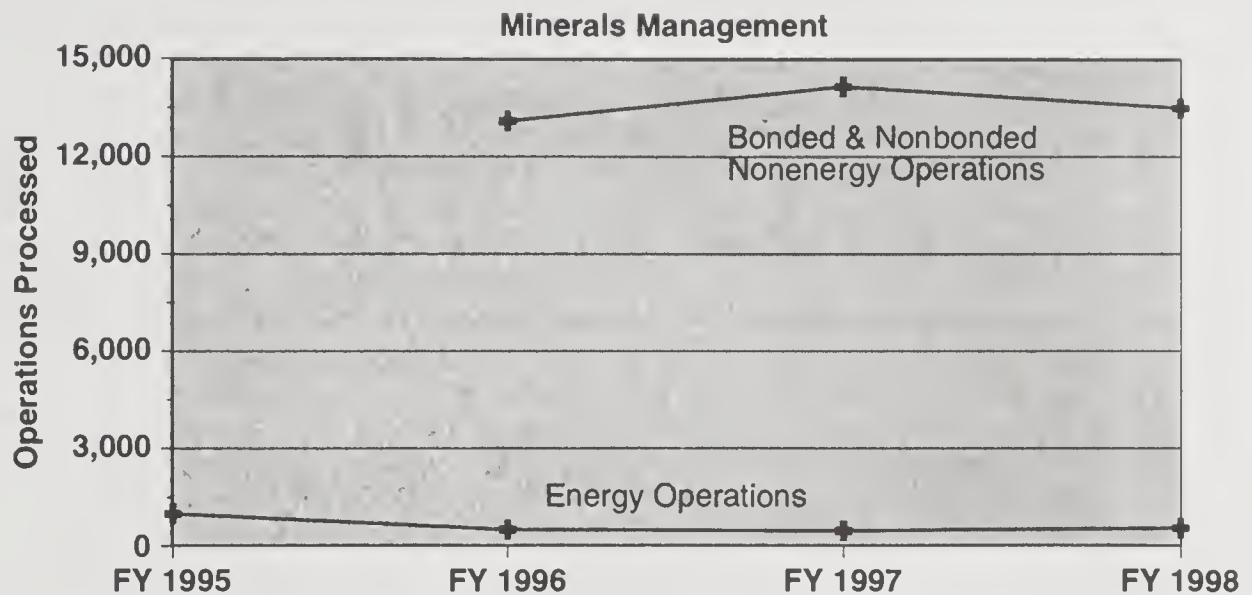
Performance Indicators #	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
Bonded and nonbonded nonenergy operations processed (number)	9,072 (FY's 96-97)	14,144	13,481
Energy operations processed (number)	646	455	544

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

The Forest Service role in mineral development varies. The agency prepares site-specific NEPA documents for proposed operations, determines if design or mitigation measures are necessary, and monitors and inspects operations. By processing development proposals on time, the agency ensures that mineral resources are available to meet demand. In recent years, the agency has been more successful at meeting this objective, in part by securing funding for NEPA analyses from potential operators.

Most mining activities require extensive coordination and review with the DOI. For example, on the Thunder Basin National Grassland in Wyoming, the Office of Surface Mining is responsible for managing on-the-ground operations of a coal mine, BLM monitors resource production, and the Minerals Management Service collects royalties. The Forest Service ensures surface protection and monitors the operation to ensure that production is conducted in an ecologically sound manner.





On a national level, several Memoranda of Understanding call for close cooperation, coordination, and sharing resources with the BLM. While not specific to the minerals and geology program, they open the door to helping each other process, administer, and oversee energy and nonenergy developments.

**Objective 2.8: Better resource management decisions based on the best available scientific and management information.**

The task of planning for the full range of multiple-use management activities has become more complex as a result of increasing demands for a limited resource base. Research and land and resource management planning efforts help agency managers quantify and understand the social and economic trade-offs among various policy options.

The Forest Service research organization provides information about relationships between the resource and natural and human-caused change. Most resource management issues today cut across disciplines. For example, fish habitat issues link to timber management, livestock grazing, and road maintenance issues. Integrating research efforts across disciplines increases the cost-effectiveness of research efforts and helps NFS managers understand issues and solutions from a broader, ecosystem perspective.

In FY 1998, over 1,500 technical reports, brochures, articles, and audio-visual materials were completed to assist in the transfer of research information to a wide variety of end users. Approximately 6 percent of all Forest Inventory and Analysis (FIA) field plots were reinventoried in 1998, moving toward an annual goal of 20 percent within this program that covers all public and private forests in the United States and its territories.

The complexity and data-intensive nature of the existing forest planning process demands substantial time and funding to acquire, analyze, and interpret information. Three land and resource management plan (LRMP) revisions were initiated in FY 1998 based on the need to change existing direction as the basis for plan decisions.

The Secretary of Agriculture's Committee of Scientists, supported by the EMCT and other agency staff, has completed its review of Forest Service planning regulations and issued a draft set of recommendations that will lead to a proposed rule in FY 1999.

Nearly 70 monitoring reports at various scales were completed in FY 1998. Inventory and monitoring provide the information needed to initiate LRMP revisions, leading to an anticipated 23 completions by the year 2000. Five of the nine regions produced a *State of the Region* evaluation report, down from nine in FY1997, primarily due to changes in content requirements and in regional staffing. Since this is a relatively new item, it may take several years for the regions to refine the processes needed to conduct useful evaluations for this type of report. In FY 1999 full compliance is expected.

<b>Performance Indicators #</b>	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
Technical reports (number)	NA	NA	1,526
FIA field plots remeasured (percent)	6%	6%	6%
LRMP revisions, new plans initiated	8	11	3
LRMP revisions completed	NA	5	2
LRMP monitoring and evaluation (reports)	60	92	64
State of the Region evaluations (reports)	NA	9	5

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

Interagency efforts in 1998 included large-scale assessments such as the Southern Appalachian Assessment. The results of this assessment have been developed and shared by a number of Federal and State agencies, including the Forest Service, National Park Service, Tennessee Valley Authority, and Army Corps of Engineers. Completed over a 2-year span at relatively low cost, the assessment has already provided invaluable support for several agency planning efforts.

#### **Objective 2.9: A safe environment for the public and employees on NFS lands.**

Through the Law Enforcement and Investigations program, the agency seeks to reduce criminal activities associated with loss and damage to natural resources and structures, and increase forest patrols to create a safer environment for visitors and employees.

<b>Annual Reporting Items #</b>	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
Incident warning & violation notices (number)	NA	298,280	288,370
Interagency agreements completed (number)	NA	717	693
Projected investigations (number)	NA	1,130	1,853

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

In FY 1998, the Forest Service continued to work toward reducing criminal activities associated with loss and damage to natural resources and structures below FY 1997 levels. Specific examples of related investigations include: timber theft, arson, archeological resources, and illegal drug cultivation.

Annual performance measures for law enforcement are under development. Several indicators, such as the number of incidents that occurred and the number of investigations conducted, are used to indicate relative levels of activity in law enforcement, but are not appropriate for distribution to the field as targets. Many such measures are complex, and require careful interpretation. For example, while increased numbers of violation notices issued might suggest greater levels of performance, the goal is to actually issue fewer notices in a safer environment characterized by greater public compliance.

Law enforcement issues cut across jurisdictional boundaries. Interagency efforts enable Federal, State, and county law enforcement operations to share resources and expertise. For example, Forest Service law enforcement officers worked closely with Border Patrol agents within national forests, located on or near international borders, to combat and mitigate the natural resource and public safety impacts of illegal drug smuggling and illegal immigration.

At a more local level, cooperative agreements provided funds to county law enforcement agencies to purchase equipment and perform patrols on NFS land. Detection and eradication of marijuana were conducted to meet the President's goals as identified in the 1998 National Drug Control Strategy.

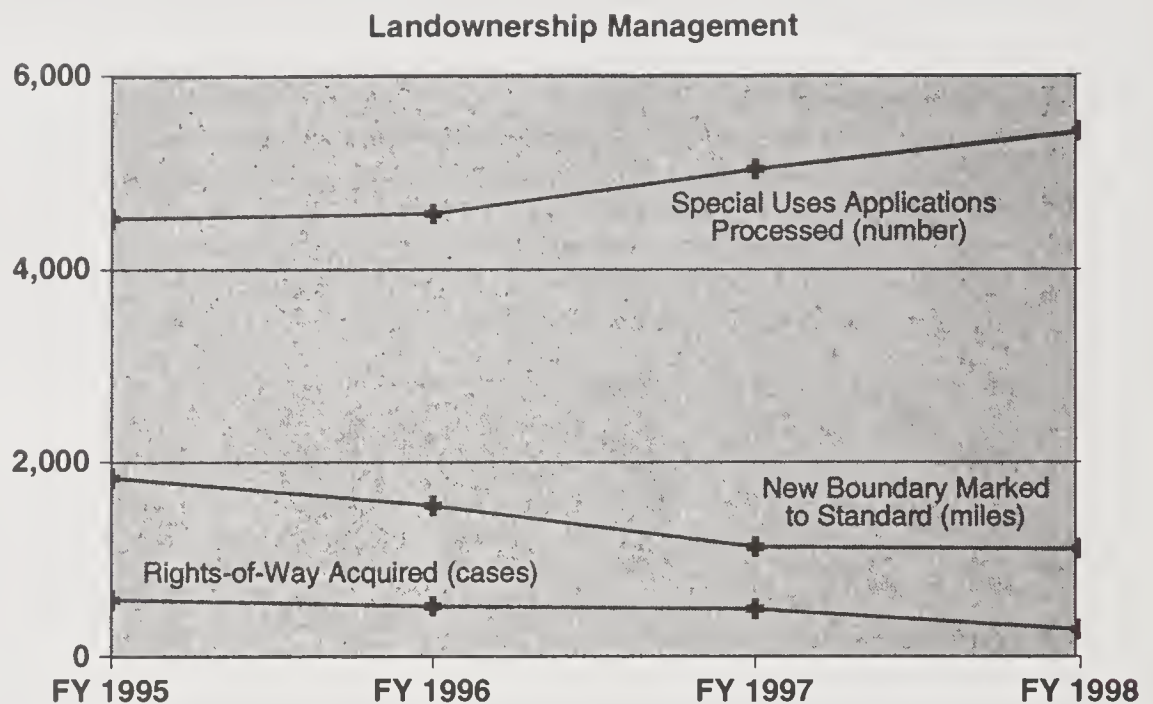
**Objective 2.10: NFS resources and land title are protected through conflict-free and legally defensible boundary lines, administration of special use authorizations, and provision of quality geometronics data for planning and management.**

Through the Landownership Management program, the Forest Service surveys, marks, and maintains boundary lines to standard, administers special use authorizations to meet public health and safety standards, responds to applications for new authorizations, and provides geometronics data for planning and management.

Landlines established by legal surveys, which are clearly marked and posted, provide managers with defined boundaries for resource activities and development, while protecting property rights of adjoining landowners. Maintaining secure and clear landline boundaries prevents encroachments, landownership disputes, and timber trespasses. Accomplishments by category and region are shown in Table 42.

The agency is cooperating with BLM and contracting with private sector firms to achieve long-term landline goals. Through an interagency agreement, the Forest Service participates in the FS-BLM 9800 Fund Transfer Program to share and/or transfer the costs of surveying, marking, and posting boundary lines. This program ensures that public land boundaries are marked consistently, are marked only once, and that people needed to complete the job at either agency are available. In FY 1998, reimbursements totaled about \$1.4 million.





Special use authorizations, including communication sites, public and private roads, hydropower license renewals, and energy related transmission rights-of-way, are all a part of the goods and services provided from NFS lands. Over 6,000 applications are submitted annually, and the total number processed in a timely fashion in FY 1998 continued to increase over prior years. These permits also provide support to other Federal, State, and local agencies in fulfilling their missions.

Performance Indicators #	Performance Baseline, FY's 1995-97 Average	FY 1997 Final	FY 1998 Final
New boundary marked to standard (miles)	1,500	1,119	1,100
Rights-of-way acquired (cases)	526	484	277
Special uses applications processed	4,711	5,033	5,421
Special uses permits administered to standard	20,193	20,996	14,926
Hydropower license renewals	NA	NA	89
Revised Primary Base Series quads maintained to standard (number)	NA	645	653
Revised Secondary Base Series quads maintained to standard (number)	NA	32	23

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98.

The types and numbers of permits and stages or levels at which a permit would be considered complete or fully administered for a given category are under review. As a result, these accomplishments will be measured and reported within a standardized and automated system by FY 2001.

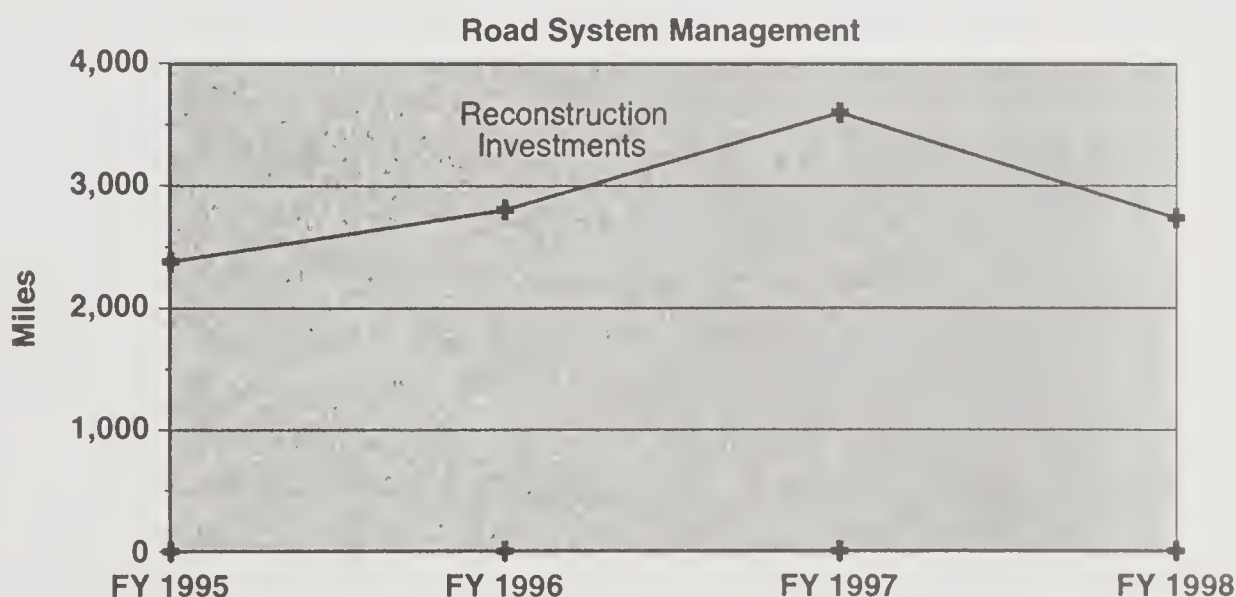
The number of rights-of-way acquisition cases continued to decline in FY 1998 for two main reasons. First, current levels of forest management activities that often require road access rights-of-way have declined over the past 2 years. Second, some regions have increased their acquisition of temporary rights-of-way in lieu of perpetual multiple-use access.

**Objective 2.11: An efficient and effective infrastructure that supports public and administrative uses of NFS lands.**

Forest Service facilities are maintained to provide for a healthy and safe work environment, and to meet legal and safety requirements. This results in higher employee productivity, improved public image, and better customer service through better access. Adequate facilities and equipment also increase productivity in environmental resource development and use. At the same time, roads and facilities that are maintained to an acceptable standard help conserve resources and protect ecosystems by mitigating adverse environmental impacts.

<b>Performance Indicators #</b> (Agenda Items in Boldface)	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
<b>System roads maintained to standard (% of total)</b>	18%	16%	16%
<b>Investments in existing roads (miles)</b>	2,924	3,594	2,732
Bridges inspected as scheduled (%)	95%	95%	90%
Dams inspected as scheduled (%)	85%	85%	85%

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FY's 1995-98. See Tables 42-45 in the Statistical Appendix for more detail.



Half of all Forest Service-owned facilities are at least 30 years old, and more than one-third of them are over 50 years old. These aging facilities are now beginning to deteriorate rapidly. The triage approach to infrastructure maintenance and repair required by recent annual appropriations cannot keep up with overall needs. To keep these facilities safe and accessible, the agency is exploring private funding, concessionaire operations, public/private ventures, and matching grants through programs such as the Transportation Equity Act for the 21st Century (T21) to supplement regular agency appropriations.

Sharing facilities with other Federal agencies is helping to address facility maintenance and repair needs. In Colorado, the Forest Service and BLM share visitor centers and administrative offices, which saves money and supports one-stop shopping for customers who need services from both agencies. Similarly, the Forest Service and other USDA agencies share office space to reduce the cost of rent, utilities, and maintenance.



### Goal 3: Ensure Organizational Effectiveness

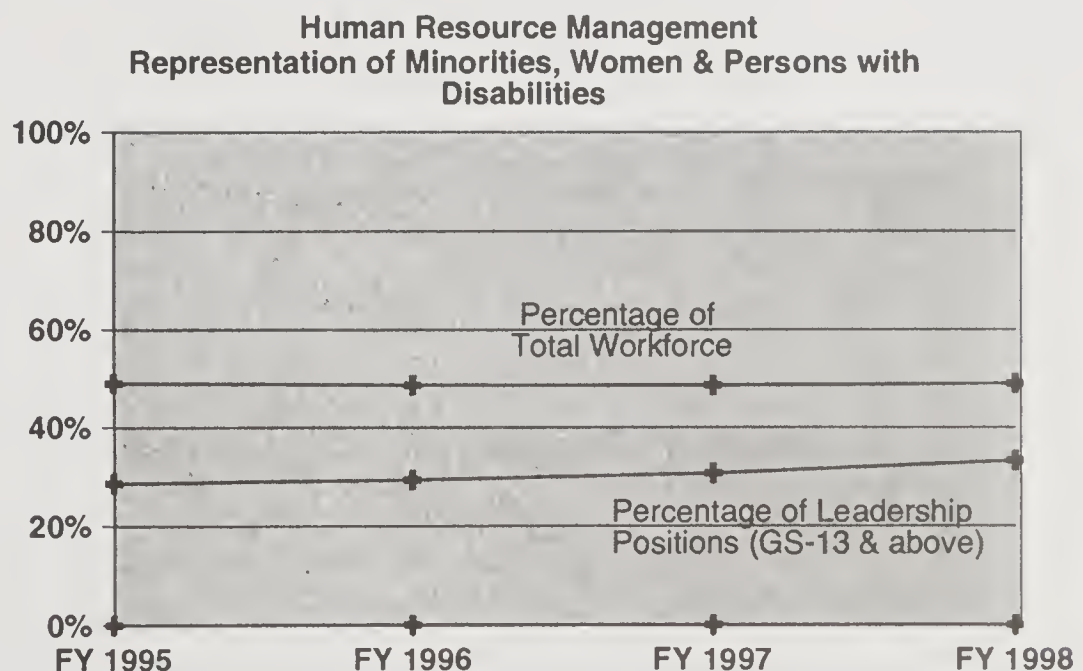
The need to have an effective and efficient administrative organization is widely recognized. In response to public demand for more efficient and effective governmental operations, Congress has taken steps to increase accountability for performance throughout the Federal Government. The President's National Performance Review directs agencies to review their business processes and find ways to become more efficient. The Forest Service reinvention study identified a number of activities that could be improved through reengineering.

To address these concerns, in FY 1998 the Forest Service initiated *Project Ponderosa* to focus attention, energy, and resources on improving the manner in which the agency conducts its business operations. The following management initiatives outline in more detail the agency's progress in these areas.

*[Note: These overarching concerns are expressed as Management Initiative 3.5 in the GPRA Strategic Plan and Annual Performance Plans. Since those plans do not identify specific indicators or outputs for that initiative, in this report it is treated as an organizing theme or principle.]*

#### Management Initiative 3.1: An innovative, people-oriented work environment and workforce that is representative of society as a whole and that services all customers equally.

A key component of an effective organization is a workforce that is representative of the agency's customers and American public. The Forest Service report *Toward a Multicultural Organization (1991)* set the course to meeting these challenges. Goals and strategies were identified to allow the Forest Service to attract, retain, and provide career opportunities for employees of various ethnic, cultural, and religious backgrounds, as well as those with disabilities (see Tables 46-50).



As a result of USDA customer and employee concerns, the Secretary of Agriculture established a Civil Rights Action Team in 1997 to develop recommendations for improved employee and customer relations and program delivery throughout the Department. The Secretary accepted those recommendations, and many of them have been implemented within the Forest Service and/or Department-wide. For example, in FY 1998 the Forest Service established a team to resolve employee complaints dealing with civil rights issues. Improvements will be measured using indicators identified in the USDA Civil Rights Action Team report. Work to implement the remaining recommendations is ongoing.

The agency monitors employee satisfaction through the Continuous Improvement Process (CIP) questionnaire. The survey covers communication, human resource management, job satisfaction, organizational management, service and quality, and supervision. By establishing a baseline, identifying areas needing improvement, and setting and achieving goals, an improved work environment is expected to increase employee productivity.

In 1998, Human Resource Management (HRM) conducted program reviews in Region 2 and Region 6. It was found that streamlining activities, efforts related to increasing opportunities for persons with disabilities, and LMR Partnerships are very strong. There are concerns about heavy workloads in HRM, and lack of strategic direction in the delivery of HR services. A national evaluation of service delivery and quality of current services is now underway, and a Service-wide workforce plan is being initiated.

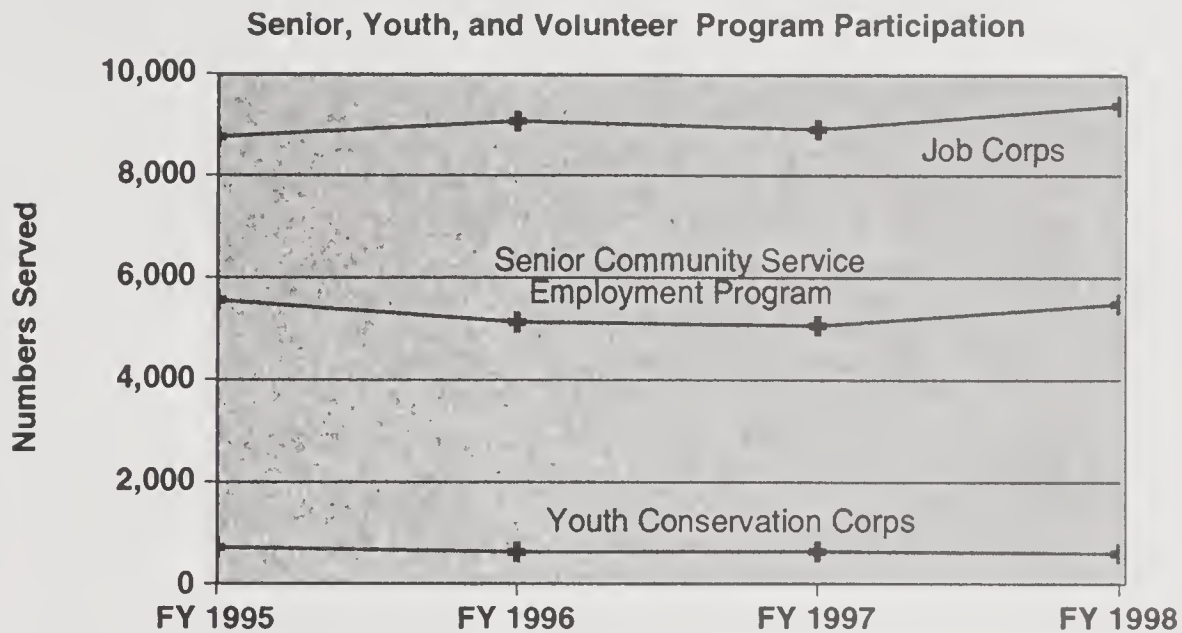
Much progress has been made and efforts continue today as shown in the accompanying table and graph. Building skills and cultural awareness for working with low-income, minority, historically underserved communities and tribal governments is also an area that continues to be emphasized.

<b>Performance Indicators #</b>	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
Minorities, women, and persons with disabilities in the workforce (% of total)	48.7%	48.5%	48.9%
Minorities, women, and persons with disabilities in leadership positions (% of positions GS-13 +)	30.2%	30.6%	33.2%
Employee participation in CIP survey (% of workforce)	58%	58%	65%
Participants in Senior, Youth, and Volunteer programs (number)			
Youth Conservation Corps	656	632	594
Job Corps	8,903	8,903	9,373
Senior Community Service Employment	5,246	5,055	5,484
Hosted	9,226	7,793	11,976
Volunteers in National Forests	91,609	112,384	98,271

# Sources include Annual Reports of the Forest Service (FY's 1995-97); final MAR for FYs 1995-98.

The agency is committed to providing work, training, and educational opportunities to the unemployed, underemployed, elderly, youth, and others with special needs. In FY 1998, 125,698 individuals participated in Job Corps, Senior Community Service Employment Program (SCSEP), Volunteers in the National Forests, Youth Conservation Corps (YCC),

and the Hosted Program. Together, these Senior, Youth, and Volunteer Programs (SYVP) accomplished high-priority conservation work valued at over \$109 million in support of the Forest Service mission.



**Management Initiative 3.2: All customers receive better service.**

Providing good customer service is a critical component of the Forest Service mission. As a High Impact Agency, this management initiative provides a means of addressing aspects of the five customer service goals identified in the National Performance Review. These include:

- 1) offering the opportunity for customers, contractors, suppliers, and vendors to conduct financial transactions electronically;
- 2) offering applicants and permittees toll-free telephone, World Wide Web, and automated applications for many special use permits;
- 3) using internal enterprise teams to improve management efficiency of the national forests in California;
- 4) improving service to public land users through "one-stop shopping" in conjunction with the BLM; and
- 5) providing an integrated, nationwide outdoor recreation information and reservation system in partnership with BLM and the National Park Service.

An agency customer service team created in response to Executive Order 12862, "Setting Customer Service Standards," has provided agencywide direction and led the effort in measuring customer satisfaction. In FY's 1996-97, the customer service team administered nine different customer satisfaction surveys to external customers of the agency. The surveys covered NFS, R&D, and S&PF, and were administered to a



random sample of customers from selected forests, all research stations, and the Forest Service Northeastern Area. They covered recreation, timber sale contracts, range permits, and other programs.

In FY 1998, each office began using the results to develop the improvements identified by their customers. The results of some of the surveys conducted in FY 1997-98 are shown under Objectives 1.6, 2.1, 2.5, 2.6, 2.7, 2.8, and 2.11. As surveys are completed in future years, it is expected that trends in customer satisfaction will be displayed under each appropriate objective.

<b>Performance Indicators</b>	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
Offer to all customers, contractors, suppliers and vendors the opportunity to conduct electronic financial transactions.	NA	NA	Some reference materials available.
Establish internal enterprise teams to improve management efficiency of national forests in California.	NA	NA	Several pilot teams now in place.
Offer toll-free telephone, World Wide Web, and automated applications to all permittees and applicants of most frequently requested special use permits.	NA	NA	Joint FS and BLM web page in place.
Improve service to public land users by providing one-stop shopping for information, permits, and other frequently requested over-the-counter products and services at BLM and Forest Service facilities.	NA	NA	"Service first" agreement signed by FS Chief and BLM Director.
Provide an integrated nationwide outdoor recreation information system that gives all Americans quick and easy access to the BLM, National Park Service, and Forest Service, including recreation use permits and reservations.	NA	NA	System in place, goal achieved.
Customer satisfaction surveys completed (number)	9	9	5

**Management Initiative 3.3: Integrated information systems, data structures, and information management processes in place to support the agency's mission.**

At the end of FY 1998, approximately 70 percent of the agency's employees were IBM system users. Progress was accelerating on redesigning the agency's information processes and applications to meet the needs of the agency and ensure Y2K compliance of all mission critical systems by January 1, 2000.

Additional performance indicators are being considered or are under development. Availability of data, consistency of definitions, and utility for managers are factors that will determine whether indicators are used in annual performance measurement or for longer term monitoring.

<b>Performance indicators</b>	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
IBM system users (% of employees)	33%	33%	70%
Mission critical systems tested and found to be Y2K compliant (% of total)	10%	10%	30%

In order to meet the increasing demands that are being placed on the Forest Service, it is essential that all information be integrated into an electronic medium where it can be readily accessed and easily shared. The IBM system provides not only administrative applications, but also a Geographic Information System (GIS) capability, which will allow greater and quicker manipulation of resource information crucial to decisionmaking. It will also provide better communications between the Forest Service and others, thus facilitating the representation and integration of varying views into agency decisionmaking.

In FY 1998, two program reviews related to Management Initiative 3.3 were scheduled for three regions. Two reviews were actually conducted, with the following findings:

- Good progress was being made in the regions on converting from the legacy Data General computer equipment to the replacement IBM computer platform.
- Good progress was being made in the regions on assessing Y2K problems of regional software applications and in accomplishing the redesign and repair work needed to resolve those problems.
- Improvement was needed in providing employees with training on the new IBM environment.
- Improvement was needed to cut regional software distribution cycle times by 50 percent.
- Improvement was needed to develop a more detailed strategy for upgrading aging parts of the regional telecommunications networks.
- Improvement was needed in coordinating wide-area planning for GIS efforts.
- Improvement was needed at the local (forest and district) levels in assessing the Y2K problems of local applications and repairing same.

**Management Initiative 3.4: A sound financial system that supports resource decisions with timely, accurate information and financial expertise.**

In July 1996, the USDA Inspector General issued an adverse opinion criticizing systems, operations, and skills used by the Forest Service in financial management. The audit identified seven areas of deficiency: 1) property, plant, and equipment, 2) accounts receivable, 3) net position - equity of the U.S. Government accounts, 4) reimbursements, 5) revenues from the sale of goods and services, 6) program and operating expenses, and 7) depreciation and amortization expense. The agency is committed to working with the USDA Office of the Chief Financial Officer, Office of Inspector General (OIG), and the General Accounting Office to remedy these deficiencies with a goal of having an unqualified opinion on the 2000 financial audit report (to be issued in March 2001).

Several teams commissioned by the Forest Service Chief Operating Officer have taken the first steps to address the USDA Inspector General's concerns. Efforts are underway to find ways to improve and simplify the budget structure, reduce the number of management and work activity codes, develop useful and accurate financial reports for managers, and identify related staffing needs. Ongoing efforts to develop improved financial systems and processes (i.e., the Foundation Financial Information System - FFIS) will facilitate cost-revenue comparisons and further enhance the capability of Forest Service managers to make sound resource decisions under all objectives.

A significant achievement in FY 1998 was the establishment of the agency's Chief Financial Officer position, and filling it with an experienced administrator. Reorganization of the Program Development and Budget and Financial Management staff areas under this new Deputy Chief was also accomplished.

In FY 1998, the agency continued to implement financial systems that support fiscal accountability; that are integrated across USDA; and that facilitate comparisons of costs, revenues and accomplishments. Tables 51-56 summarize data available at this time. In the past year, the Forest Service also sought to respond to OIG audits in a timely manner and collected external debts using the tools provided in the Debt Collection Improvement Act of 1996. Several performance measures are under development for this objective and are outlined below.

<b>Performance Indicators</b>	<b>Performance Baseline, FY's 1995-97 Average</b>	<b>FY 1997 Final</b>	<b>FY 1998 Final</b>
FFIS implemented	NA	NA	3 pilot units
Real Property Inventory completed	NA	NA	No
Financial management reports developed showing obligations, direct/indirect costs and performance indicator costs	NA	NA	No
Unqualified audit opinion (Yes/No)	No	No	No
Audit items from the Secretary's Management Report eliminated	No	No	No



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Table 1—National Forest System lands administered by the Forest Service as of September 30, 1998

State, Commonwealth, or Territory	National forests, purchase units, research areas, and other areas	National grasslands	Land utilization projects	Total	National Wilderness Preservation System 1/ Acres
		Acres			
Alabama	664,947	0	40	664,987	32,167
Alaska	21,974,039	0	0	21,974,039	5,752,541
Arizona	11,255,004	0	0	11,255,004	1,345,008
Arkansas	2,579,315	0	0	2,579,315	116,578
California	20,634,497	18,425	0	20,652,922	4,432,634
Colorado	13,880,773	628,380	0	14,509,153	3,147,860
Connecticut	24	0	0	24	0
Florida	1,147,224	0	0	1,147,224	74,495
Georgia	865,080	0	0	865,080	114,537
Hawaii	1	0	0	1	0
Idaho	20,411,354	47,756	0	20,459,110	3,961,578
Illinois	292,576	0	0	292,576	25,638
Indiana	196,098	0	0	196,098	12,945
Kansas	0	108,175	0	108,175	0
Kentucky	693,180	0	0	693,180	16,779
Louisiana	604,210	0	0	604,210	8,679
Maine	53,040	0	0	53,040	12,000
Michigan	2,856,807	0	2	2,856,809	91,891
Minnesota	2,837,591	0	0	2,837,591	809,772
Mississippi	1,158,716	0	0	1,158,716	6,046
Missouri	1,495,156	0	0	1,495,156	63,198
Montana	16,886,017	0	0	16,886,017	3,372,503
Nebraska	257,612	94,480	0	352,092	7,794
Nevada	5,826,255	0	0	5,826,255	787,085
New Hampshire	727,251	0	0	727,251	102,932
New Mexico	9,189,983	136,417	240	9,326,640	1,388,262
New York	16,164	0	0	16,164	0
North Carolina	1,243,823	0	0	1,243,823	102,634
North Dakota	743	1,105,009	0	1,105,752	0
Ohio	228,585	0	0	228,585	0
Oklahoma	350,502	46,286	0	396,788	14,543
Oregon	15,543,284	112,347	856	15,656,487	2,073,244
Pennsylvania	513,361	0	0	513,361	8,938
Puerto Rico	27,831	0	0	27,831	0
South Carolina	613,025	0	0	613,025	16,671
South Dakota	1,145,120	867,155	0	2,012,275	9,826
Tennessee	634,466	0	0	634,466	66,349
Texas	637,399	117,620	0	755,019	38,483
Utah	8,111,041	0	0	8,111,041	773,818
Vermont	368,426	0	0	368,426	59,421
Virgin Islands	147	0	0	147	0
Virginia	1,658,769	0	0	1,658,769	87,064
Washington	9,200,938	0	738	9,201,676	2,571,609
West Virginia	1,032,695	0	0	1,032,695	80,852
Wisconsin	1,521,170	0	0	1,521,170	42,294
Wyoming	8,688,410	549,157	0	9,237,567	3,111,232
Total	188,022,649	3,831,207	1,876	191,855,732	34,739,900

1/ Includes all changes to the Wilderness Preservation System through the 106th Congress.

Table 2--Research accomplishments--fiscal years 1995-98

Research subject area 2/	Research Accomplishments 1/			
	1998	1997	1996	1995
Vegetation Management & Protection Research				
Fundamental Plant Science	281	270		
Silvicultural Applications	214	206		
Quantitative Analysis	76	73		
Forest & Rangeland Management	120	115		
Forest Operations Engineering	61	59		
Insects/Diseases/Exotic Weeds	290	279		
Fire Science	116	112		
Subtotal 3/	1,158	1,114	1,289	1,408
Wildlife, Fish, Water & Atmospheric Sciences Research				
Terrestrial Wildlife Habitat	292	281		
Aquatic Habitat	113	109		
Watershed	263	253		
Atmospheric Sciences	86	83		
Subtotal 3/	754	726	741	768
Resource Valuation and Use Research				
Economics	117	113		
Urban Forestry	38	37		
Wilderness	17	16		
Social/Cultural	150	144		
Forest Product Utilization & Processing	249	240		
Forest Product Safety/Human Health	112	108		
Subtotal 3/	683	658	705	651
Inventory & Monitoring				
Forest Inventory & Analysis	81	78		
Forest Health Monitoring	23	22		
Monitoring Methods/Applications	19	18		
Subtotal 3/	123	118	212	138
General			58	56
Grand total	2,718	2,616	3,005	3,021

1/ Research accomplishments include: books, papers in series, journal articles, proceedings, general technical reports, special reports, patents, videos, computer programs, dissertations and theses, and other similar accomplishments.

2/ Research subject area categories reflect the Research Budget and Attainment Information System, established in FY 1997.

3/ Subtotals for 1995-96 have been adjusted, as needed, to correspond with Research Budget and Attainment Information System work activities.

Table 3--Forest Research funding--fiscal years 1994-98

	1998	1997	1996	1995	1994
	<i>1,000 dollars actual</i>				
Appropriated accounts					
Forest protection research					41,089
Resource analysis research					35,932
Forest management research					40,887
Forest environment research					41,978
Forest products and harvesting research					25,697
Ecosystem research					7,500
Research foundation program 1/				111,376	
Forest resources and management research 1/				74,178	
Ecosystem reserach 1/				7955	
Forest and Rangeland Research 2/	187,944	179,781	177,854		
Subtotal	187,944	179,781	177,854	193,509	193,083
Transfer from timber salvage sales 3/	0	0	0	0	1,963
Research construction (subtotal)	2,560	2,000	2,000	4,316	4,910
Total appropriated accounts	190,504	181,781	179,854	197,825	199,956
Reimbursable accounts (subtotal)	16,290	10,993	14,898		19,578
Grand Total	206,794	192,774	194,752	197,825	219,534

1/ In FY 1995, the budget structure was revised from six major budget line items to three. The three budget line items for FY 1995 overlap those used the previous years.

2/ In FY 1996, the budget structure was revised from three BLI's to one.

3/ FY 1994 transfer from timber salvage sale funds to cover cost of Voluntary Separation Incentive (Buyout).



**Table 4--Extramural research funded through Forest Service Research appropriations--fiscal years 1997-98**

Type of recipient	1998		1997	
	<i>1,000 dollars</i>	<i>Number of grants</i>	<i>1,000 dollars</i>	<i>Number of grants</i>
Domestic grantees				
Universities and colleges:				
Land Grant research institutions	7,595	270	15,360	512
1890 Land Grant and predominately black institutions	498	10	558	10
Other non-Land Grant institutions	7,654	212	1,375	71
Subtotal, universities and colleges	15,747	492	17,293	593
Other domestic				
Profit organizations	11	1	10	2
Nonprofit institutions and organizations	1,571	60	1,591	55
Federal, State, and local governments	254	8	825	34
Private individuals	27	4	72	10
Small business innovation research	0	0	0	0
Industrial firms	0	0	0	0
Subtotal, other domestic	1,863	73	2,498	101
Total, domestic	17,610	565	19,791	694
Foreign grantees				
Universities and colleges	0	0	0	0
Profit & nonprofit institutions and organizations	74	8	79	7
Private individuals	11	2	6	2
Total, foreign grantees	85	10	85	9
Grand total	17,695	575	19,876	703

Table 5--Summary of State and Private Forestry accomplishments--fiscal years 1997-98

Table 5--Summary of State and Private Forestry accomplishments--fiscal years 1997-98						
	Unit of measure 1/	1998 Actual	Percent of		Percent of	
			1998 Funded	1998 Actual to 1998 Funded	1997 Actual	1997 Actual to 1998 Actual
Appropriated accounts						
Forest pest management 2/						
Insect and disease management surveys	MM acres	788.0	657.0	119.9	772.0	98.0
Insect and disease suppression	MM acres	0.8	0.8	100.0	1.5	187.5
Insect and disease special projects	Projects	36.0			32.0	88.9
Forest Management and utilization						
Forest resource management						
Forest land management plans	MM acres	1.9			2.1	110.5
Timber harvested	MM cubic feet	128.7			514.0	399.4
Reforestation 3/	M acres	1,143.7			867.0	75.8
Timber stand improvement 4/	M acres	265.4			220.0	82.9
Woodland owners assisted	M owners	146.7			187.0	127.5
Wood utilization	MM cubic feet					
Seedling, nursery, and tree improvement	MM seedlings	396.5			50.0	12.6
Urban forestry assistance 5/	No. of assists	10,325.0				
Transfer accounts						
Rural community fire protection, FmHA	M approved applications					
Watershed and flood prevention, NRCS	Projects	16.0			21.0	131.3
Watershed surveys and planning, NRCS 6/	Plans				16.0	
Resource conservation and development, NRCS	Projects	196.0			258.0	131.6
Forestry Incentives Program, ASCS						
Reforestation	M acres	81.6			106.0	129.9
Timber stand improvement	M acres	18.3			22.0	120.2
Environmental Quality Incentives Program (EQIP) 7/						
Reforestation	M acres				145.0	
Timber stand improvement	M acres				9.0	

1/ M=thousand, MM=million.

2/ Includes accomplishments on National Forest System and other Federal lands, as well as State and private lands.

3/ Includes Conservation Reserve Program, Forestry Incentives Program, and Agricultural Conservation Program accomplishments.

4/ Includes Forestry Incentives Program and Agricultural Conservation Program accomplishments.

5/ Areas represent more than one assistance per community; e.g., New York, Philadelphia, etc.

6/ Data is no longer collected. These measures will be dropped.

7/ Formerly Agricultural Conservation Program, ASCS

**Table 6--State and Private Forestry funding--fiscal years 1994-98**

	1998	1997	1996	1995	1994
	<i>1,000 dollars actual</i>				
Appropriated accounts					
Forest pest management	53,490	48,165	32,971	34,902	38,541
Fire protection	20,152	18,001	17,001	13,689	17,148
Forest management and utilization	87,595	89,295	86,861	105,587	93,218
Special projects		0	0	0	19,200
Subtotal	161,237	155,461	136,833	154,178	168,107
Transfer accounts					
Rural community fire protection	2,000	1,285	2,000	3,400	3,500
Watershed and flood prevention	27	267	139	500	2,020
Watershed planning	491	270	107 1/	230	303
Watershed operations	81	218	173 1/	151	410
Emergency watershed protection	3,392	1,989	0 1/	0	0
Resource conservation and development	332	542	494	594	555
River basin surveys and investigations	0	0	345 1/	570	830
Forestry Incentives Program 2/	632	631	633	662	1,169
Agricultural Conservation Program 2/	0	0	750	1,000	1,824
Pesticide assessment	360	355	361 1/	360	190
Subtotal	7,315	5,557	5,002	7,467	10,801 3/
Total	168,552	161,018	141,835	161,645	178,908 3/

1/ The numbers originally published in 1996 were estimates. They have been changed to reflect actual amounts.

2/ Includes only technical assistance allocated for the Forestry Incentives and Agricultural Conservation Programs (administered jointly by FSA and FS).

3/ Totals appear different than those published in the FY 1996 Report of the Forest Service due to a formula error.



Table 7--Summary of National Forest System accomplishments compared to funded output levels and 5-year average--fiscal year 1998

Resource area	Activity	Units 1/	1998 Funded	1998 Actual 2/	1998 Actual to Funded	1997 Actual 2/	1997 Actual to 1998 Actual	1994-98 average accomp.
Recreation	Visitor use	MM RVD's 3/			NA			203.3
		MM visits 3/			NA			171.9
Wilderness	Management	MM acres	179.2	167.2	93.3	34.7	20.8	61.2
Wildlife & fish	Habitat restored/enhanced							
	Appropriated funds	Structures	0.0	5,542.5	NA	6,351.0	114.6	8,241.7
	K-V funds 4/	Structures	0.0	17,955.0	NA	32,954.0	183.5	23,627.1
	Strm habitat restored/enhanced 5/							
	Appropriated funds	Miles	1,783.9	1,843.0	103.3	2,006.0	108.8	1,437.2
	K-V funds	Miles	0.0	344.0	NA	729.0	211.9	312.4
Range	Forage improvement							
	Appropriated funds	M acres	30.1	23.8	79.1	36.9	155.0	41.7
	K-V funds	M acres	0.0	8.6	NA	12.5	145.3	9.0
	Forage improvement							
	Appropriated funds	Structures	960.0	1,369.8	142.7	1,718.0	125.4	1,845.7
	K-V funds	Structures	0.0	169.5	NA	328.0	193.5	291.1
Forest Management	Sales offering	B bd. ft.	0.0	3.4	NA	4.0	117.6	3.8
	Reforestation 6/							
	Appropriated funds	M acres	100.4	117.3	116.8	128.1	109.2	131.5
	K-V funds	M acres	160.7	170.6	106.2	193.4	113.4	226.3
	Timber stand improvement							
	Appropriated funds	M acres	151.7	167.8	110.6	118.9	70.9	137.9
	K-V funds	M acres	136.2	129.0	94.7	139.0	107.8	132.1
Soil & water	Resource improvements							
	Appropriated funds	M acres	27.3	38.5	141.0	46.1	119.7	34.1
	K-V funds	M acres	0.0	18.2	NA	17.5	96.2	13.1
Minerals	Bonded nonenergy ops. 5/	Ops. processed	0.0	803.0	NA	961.0	119.7	6,483.3
	Energy operations 5/	Ops. processed	0.0	544.0	NA	455.0	83.6	496.6

See footnotes at end of table.

**Table 7--Summary of National Forest System accomplishments compared to funded output levels and 5-year average--fiscal year 1998--Continued**

Resource area	Activity	Units 1/	1998 Funded	1998 Actual 2/	1998 Actual to Funded	1997 Actual 2/	1997 Actual to 1998 Actual	1994-98 average accomp.
Support	Trail construction/reconstruction	Miles	0.0	2,149.5	NA	1,673.7	77.9	1,954.4
	Road construction							
	Appropriated funds							
	Construction	Miles	0.0	11.2	NA	8.2	73.2	17.0
	Reconstruction	Miles	2,959.8	336.7	11.4	384.3	114.1	409.2
	Purchaser credit							
	Construction 7/	Miles	0.0	203.4	NA	391.6	192.5	396.1
	Reconstruction 7/	Miles	0.0	2,395.4	NA	3,209.6	134.0	2,293.1
	Fuels management							
	Appropriated funds	M acres	1,249.2	1,455.5	116.5	887.1	60.9	773.6
	Brush disposal funds	M acres	109.8	115.5	105.2	131.3	113.7	161.8
	Land acquired							
	Purchase and donation	M acres	20.1	97.0	482.6	103.0	106.2	83.3
	Exchanges	M acres	94.3	80.3	85.2	244.2	304.1	112.9
	Landline location	Miles	0.0	989.5	NA	1,117.0	112.9	1,614.3

1/ M = thousand, MM = million, B = billion, RVD = recreation visitor day.

2/ Does not include accomplishments from contributed funding sources.

3/ Data not available for FY 1997 or 1998.

4/ K-V = Knutson Vandenbergh Act.

5/ New indicator in FY 1995. Average is based on 4 years of accomplishments.

6/ Includes natural regeneration without site preparation.

7/ Includes miles turned back to the Forest Service for construction or reconstruction (purchaser election program).

Table 8--National Forest System funding--fiscal years 1994-98

	1998	1997	1996	1995	1994
	<i>1,000 dollars actual</i>				
Ecosystem planning, inventory, and monitoring 1/		130,088	130,088	149,732	
Land Management Planning	36,174				
Inventory and Monitoring	91,931				
Minerals and geology management	36,000	35,767	35,017	38,932	33,017
Real estate management	47,014	43,047	43,047	45,621	34,880
Landline location	14,973	14,006	14,006	15,945	28,783
Maintenance of facilities	24,244	23,008	23,008	26,304	26,476
Law enforcement operations	63,967	59,637	59,637	63,516	55,130
Forest road maintenance	84,974	81,019	81,019	83,784	79,180
Timber sales management	208,848	196,000	188,641	108,555	184,606
Forestland vegetation management 2/	95,732	86,168	82,138 3/	84,907	62,339
Recreation use	218,260	211,151	211,151	220,136	224,522
Wildlife and fish habitat management	96,768	85,811	85,561	93,182	121,130
Rangeland management	45,314	38,012	27,012	18,473	44,127
Soil, water, and air management	51,196	42,114	42,014	48,282	77,984
Storm Supplemental	10,461				
Subtotal	1,125,856	1,045,828	1,022,339 4/	997,369 4/	972,174
General Administration (subtotal)	261,888	259,353	263,698	296,982	298,174
Preparedness and fire use	319,167	319,315	295,315	160,010	190,108
Suppression operations	265,392	510,701	90,170	225,628	190,222
Emergency contingency	0	0	100,000		
Storm Supplemental	2,000				
Subtotal	586,559	830,016	485,485	385,638	380,330
Youth Conservation Corps (subtotal) 5/	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)
Construction					
Construction of facilities 6/	47,919	59,974	46,029	61,588	94,437
Forest road and trail construction 7/	115,359	115,000	114,951	98,185	97,345
Forest trail construction	0	0		32,448	32,310
Emergency supplemental	0	32,895	60,800		
Forest roads purchaser construction 8/	(38,974)	(36,854)	(41,291)	(50,000)	(60,000)
Transfer to salvage	0	0	0	0	0
Watershed restoration	0	0	0	0	20,000
Subtotal	163,278	207,869	221,780	192,221	244,092

See footnotes at end of table.



Table 8--National Forest System funding--fiscal years 1994-98--Continued

	1998	1997	1996	1995	1994
	<i>1,000 dollars actual</i>				
Land acquisition	52,976	40,575	39,392	63,873	64,250
Acquisition of lands for national forests, special acts	1,069	1,048	1,069	1,247	1,212
Acquisition of lands to complete exchanges	210	364	341	794	203
Gifts, donations and bequests	92	55	87	4	96
Range betterment	3,811	3,453	4,647	1,149	4,600
Permanent appropriations	510,512	484,868	512,001 9/	506,289	542,774
Trust funds	231,885	206,703	205,597 10/	222,953	298,404
<b>Total</b>	<b>2,938,136</b>	<b>3,080,132</b>	<b>2,756,436 4/</b>	<b>2,668,519 4/</b>	<b>2,806,309</b>

1/ Ecosystem Planning, Inventory, and Monitoring was funded through one line item from FY 1995-97. The FY 1998 Interior and Related Agencies Appropriation Act split the activity into two line items, Land Management Planning and Inventory and Monitoring.

2/ Includes reforestation trust fund dollars.

3/ Number has been revised from that published in the FY 1996 Report of the Forest Service to include reforestation trust fund dollars.

4/ Number has been revised from that published in the FY 1997 Report of the Forest Service to correct an error.

5/ Appropriations Act required minimum level of funding from national forest funds; amounts not included in totals.

1994 - operated a \$1.7 million program from available funds.

1995 - operated a \$1.3 million program from available funds.

1996 - operated a \$1.2 million program from available funds.

1997 - operated a \$1.8 million program from available funds.

1998 - operated a \$1.0 million program from available funds.

6/ Excludes construction of research facilities.

7/ In FY 1996, road and trail construction EBLI's were combined.

8/ This account was taken off budget in 1982. For comparison, the amounts are shown a non-add items.

9/ Number has been revised from that published in the FY 1996 Report of the Forest Service to include Payments to States.

10/ Number has been revised from that published in the FY 1996 Report of the Forest Service to reflect program level funding.

**Table 9--Land acquisition and exchange--fiscal years 1997 and 1998**

	1998 acres	1997 acres
Purchase	97,046	103,023
Exchange	69,938	244,178





Table 10—Summary of forest stewardship plans and acres accomplished by State—fiscal years 1997-98

State or Territory	1998		1997		(1991-98)	
	Plans	Acres	Plans	Acres	Cumulative plans 2/	Cumulative acres
Alabama	305	82,469	237	104,013	2,062	461,893
Alaska	46	441,834	48	334,093	273	2,870,329
American Samoa	47	110	62	401	230	1,339
Arizona	21	4,738	17	1,782	138	237,551
Arkansas	256	36,928	398	20,310	1,747	297,030
California	15	9,072	7	2,272	453	256,426
Colorado	37	24,093	71	18,696	1,699	404,715
Connecticut	37	5,445	45	3,814	246	30,660
Delaware	64	4,305	104	5,016	485	32,502
Florida	123	29,821	171	42,102	1,012	393,972
Fed St of Micronesia	0	0	0	0	0	0
Georgia	75	15,563	286	60,886	2,178	689,047
Guam	17	74	20	18	136	449
Hawaii	5	72	0	0	33	5,238
Idaho	185	15,242	100	25,475	1,356	101,953
Illinois	1,367	39,278	776	27,949	8,105	331,276
Indiana	1,058	27,237	1,043	49,512	12,207	461,928
Iowa	514	18,513	484	17,981	6,630	215,457
Kansas	112	9,684	93	5,954	1,142	65,360
Kentucky	1,619	167,618	1,307	170,706	9,373	1,037,743
Louisiana	186	6,435	49	7,097	905	84,666
Maine	226	19,999	183	16,731	2,713	239,866
Maryland	378	21,329	365	17,344	3,540	197,927
Massachusetts	208	14,594	264	21,689	2,361	210,656
Michigan	400	58,237	271	37,487	2,536	349,119
Minnesota	951	93,770	708	38,990	8,040	754,000
Mississippi	0	0	0	0	690	154,101
Missouri	325	45,500	272	52,628	2,298	316,930
Montana	100	18,185	81	89,502	733	449,853
Nebraska	44	4,206	51	8,040	1,114	54,518
Nevada	7	11,901	10	4,707	170	81,962
New Hampshire	126	17,697	157	46,902	1,896	365,057
New Jersey	84	5,231	14	6,683	380	52,510
New Mexico	37	11,024	31	6,181	300	262,519
New York	833	86,062	989	116,066	12,740	1,139,238
North Carolina	140	16,352	154	17,939	1,379	220,148
North Dakota	147	5,143	158	6,942	1,174	57,056
Ohio	873	43,061	1,126	53,151	11,740	563,081
Oklahoma	111	18,651	101	22,720	712	193,480
Oregon	71	18,203	71	34,226	1,059	263,951
Pennsylvania	352	49,944	171	22,661	1,562	233,861
Puerto Rico	3	228	8	551	12	1,711
Rhode Island	16	1,006	16	784	280	11,966
South Carolina	229	49,696	210	42,608	2,062	554,339
South Dakota	102	3,157	84	3,360	922	36,969
Tennessee	244	34,937	218	30,607	1,497	270,938

See footnotes at end of table.

**Table 10—Summary of forest stewardship plans and acres accomplished by State—fiscal years 1997-98—Continued**

State or Territory	1998		1997		(1991-98)	
	Plans	Acres	Plans	Acres	Cumulative plans 2/	Cumulative acres
Texas	183	38,655	308	171,346	1,652	442,800
Utah	1	960	1	3,000	85	196,729
Vermont	61	9,166	172	24,594	1,602	236,477
Virginia	610	79,029	617	86,148	4,714	726,094
Washington	519	28,964	581	30,627	2,788	195,438
West Virginia	269	35,912	292	71,347	2,703	410,587
Wisconsin	2,947	140,489	2,285	148,544	23,231	1,158,108
Wyoming	73	11,695	88	11,788	1,178	103,201
Total	16,759	1,931,514	15,357	2,143,970	150,273	18,484,724

1/ Unlisted States had no data.

2/ Landowner forest stewardship plans.

**Table 11--Small watershed protection accomplishments--fiscal years 1994-98 (Watershed Protection and Flood Prevention Act of 1954) 1/**

	Unit of measure	1998 2/	1997	1996	1995	1994
Land treatment 3/						
Forest land	Acres	0	8,402	2,193	1,905	16,806
Cropland	Acres	0	741	1,160	0	626
Pastureland	Acres	0	88	45	7,284	28
Total land treatment	Acres	0	9,233	3,398	9,189	17,460
Landowners assisted	Number	0	1,186	1,348	1,465	1,483

1/ Accomplishments are limited to activities accomplished solely by small watershed protection program funds.

2/ In FY 1998, there were no Forest Service accomplishments to report for Table 11. Historically the Forest Service has worked with the Natural Resources Conservation Service (NRCS) in project planning and accomplishment with regard to work under the Watershed Protection Act of 1954. NRCS has assumed increased responsibility for on-the-ground project implementation. During FY 1998, Forest Service responsibility was to work with NRCS and provide forestry assistance for project work. Table 11 will be dropped.

3/ Reported in land use categories consistent with those reported by NRCS.

**Table 12--Flood prevention accomplishments--fiscal years 1994-98 (Watershed Protection and Flood Prevention Act of 1954) 1/**

	Unit of measure	1998 2/	1997	1996	1995	1994
Land treatment 3/						
Forest land	Acres	0	6,541	8,682	63,028	6,335
Cropland	Acres	0	20	1,668	575	
Pastureland	Acres	0	78	92	83	40
Total land treatment	Acres	0	6,639	10,442	63,686	6,375
Landowners assisted	Number	0	1,183	2,265	2,461	1,528

1/ Accomplishments are limited to activities accomplished solely by small watershed protection program funds.

2/ In FY 1998, there were no Forest Service accomplishments to report for Table 12. Historically the Forest Service has worked with the Natural Resources Conservation Service (NRCS) in project planning and accomplishment with regard to work under the Watershed Protection Act of 1954. NRCS has assumed increased responsibility for on-the-ground project implementation. During FY 1998, Forest Service responsibility was to work with NRCS and provide forestry assistance for project work. Table 12 will be dropped.

3/ Reported in land use categories consistent with those reported by NRCS.



**Table 13—Roads decommissioned, reconstructed, and constructed by the Forest Service—fiscal year 1998 1/**

Region	Decommissioned <i>Miles</i>	Reconstruction <i>Miles</i>	Construction <i>Miles</i>
Northern (R-1)	475.8	496.3	29.9
Rocky Mountain (R-2)	118.0	160.8	28.8
Southwest (R-3)	161.9	60.3	1.4
Intermountain (R-4)	271.2	154.0	23.1
Pacific Southwest (R-5)	83.2	339.4	16.8
Pacific Northwest (R-6)	703.1	665.2	54.5
Southern (R-8)	184.2	638.9	30.0
Eastern (R-9)	64.1	164.6	23.7
Alaska (R-10)	37.0	52.6	6.4
<b>Total</b>	<b>2,098.5</b>	<b>2,732.1</b>	<b>214.6</b>

1/ Reconstruction and construction miles accomplished are from Road Reconstruction and Construction Appropriation, and from Purchaser Credits and Purchaser Election inventory revisions, and new construction.

Table 14--Wildlife and fish habitat restoration and enhancement by region--fiscal year 1998 1/

Region	Wildlife	Inland fish	Anadromous fish	Threatened, endangered, and sensitive species	Total
Northern (R-1)					
Terrestrial acres restored/enhanced	12,365			3,890	16,255
Lake acres restored/enhanced		41		16	110
Stream miles restored/enhanced		146	32	26	130
Structures	15			31	46
Rocky Mountain (R-2)					
Terrestrial acres restored/enhanced	24,691			7,887	32,578
Lake acres restored/enhanced		64		46	110
Stream miles restored/enhanced		53		45	98
Structures	85			182	267
Southwestern (R-3)					
Terrestrial acres restored/enhanced	20,430			20,084	40,514
Lake acres restored/enhanced		1,516		2	1,518
Stream miles restored/enhanced		37		14	
Structures	134			53	187
Intermountain (R-4)					
Terrestrial acres restored/enhanced	33,572			130,600	164,172
Lake acres restored/enhanced		61		48	109
Stream miles restored/enhanced		65	6	72	143
Structures	265			356	621
Pacific Southwest (R-5)					
Terrestrial acres restored/enhanced	9,506			1,527	11,033
Lake acres restored/enhanced		495		19	514
Stream miles restored/enhanced		77	158	49	284
Structures	382			224	606
Pacific Northwest (R-6)					
Terrestrial acres restored/enhanced	19,607			2,418	22,025
Lake acres restored/enhanced		73		3	76
Stream miles restored/enhanced		76	121	34	231
Structures	1,432			153	1,585
Southern (R-8)					
Terrestrial acres restored/enhanced	33,263			33,125	66,388
Lake acres restored/enhanced		3,465			3,465
Stream miles restored/enhanced		161	50	3	214
Structures	854			864	1,718
Eastern (R-9)					
Terrestrial acres restored/enhanced	13,333			2,435	15,768
Lake acres restored/enhanced		2,369			2,369
Stream miles restored/enhanced		284	254	2	540
Structures	358			155	513

See footnotes at end of table.

Table 14—Wildlife and fish habitat restoration and enhancement by region—fiscal year 1998—Continued 1/

Region	Wildlife	Inland fish	Anadromous fish	Threatened, endangered, and sensitive species	Total
Alaska (R-10)					
Terrestrial acres restored/enhanced	450				450
Lake acres restored/enhanced		368	1,086		1,454
Stream miles restored/enhanced		12	69		81
Structures	0				0
Total					
Terrestrial acres restored/enhanced	167,217	0	0	201,966	369,183 2/
Lake acres restored/enhanced	0	8,452	1,086	134	9,672 3/
Stream miles restored/enhanced	0	911	690	245	1,846 4/
Structures	3,525	0	0	2,018	5,543 5/

1/ Includes activities accomplished with appropriated funds (Fund code 1)

2/ In addition, 208,391 terrestrial acres were restored or enhanced with contributed, K-V, or other funds.

3/ In addition, 4,137 lake acres were restored or enhanced with contributed, K-V, or other funds.

4/ In addition, 761 stream miles were restored or enhanced with contributed, K-V, or other funds.

5/ In addition, 19,606 structures were completed with contributed, K-V, or other funds.



**Table 15--Reforestation expenditures and accomplishments by funding source--fiscal years 1994-98 1/**

	Appropriated	Knutson-Vandenberg	Total
1994			
Million dollars 2/	36.0	71.0	107.0
1,000 acres	146.1	288.8	434.9 3/
Constant dollars/acre	246.4	245.8	246.0 4/
1995			
Million dollars 2/	38.7	81.9	120.6
1,000 acres	136.1	250.9	387.0 5/
Constant dollars/acre	284.3	326.4	311.6 4/
1996			
Million dollars 2/	33.2	64.6	97.8
1,000 acres	129.9	227.6	357.5 6/
Constant dollars/acre	255.6	283.8	273.6 4/
1997			
Million dollars 2/	37.4	53.5	90.9
1,000 acres	128.1	193.4	321.5 7/
Constant dollars/acre	292.0	276.6	282.7 4/
1998			
Million dollars 2/	37.7	49.4	87.1
1,000 acres	117.3	170.6	287.9 8/
Constant dollars/acre	321.4	289.6	302.5 4/

1/ Data source for accomplishments is the Timber Activity Control System silviculture data base (TRACS/Silva) and the source for expenditures is the agency's financial data base at the National Finance Center.

2/ All previously published values have been converted to an obligations basis in 1998 constant dollars. No General Administration funds or law enforcement funds included. Does not include funds for nursery and tree improvement. Errant data from prior years.

3/ Includes 101,010 acres of certified natural regeneration without site preparation, but does not include 6,194 acres accomplished with contributed funding.

4/ Weighted average.

5/ Includes 103,692 acres of certified natural regeneration without site preparation, but does not include 5,270 acres accomplished with contributed funding.

6/ Includes 113,295 acres of certified natural regeneration without site preparation, but does not include 5,403 acres accomplished with contributed funding.

7/ Includes 102,992 acres of certified natural regeneration without site preparation, but does not include 6,611 acres accomplished with contributed funding.

8/ Includes 87,622 acres of certified natural regeneration without site preparation, but does not include 4,997 acres accomplished with contributed funding.

**Table 16--Reforestation program needs--fiscal years 1998-2000 1/**

	Current and Projected 1,000 acres	Prior Year Projected 2/ 1,000 acres
Fiscal year 1998		
10/1/97 balance	763.9	764
New needs 3/	207.7	250
Actual accomplishments	(292.9)	(350)
10/1/98 balance	678.7	664
Fiscal year 1999		
10/1/98 balance	679	
New needs 3/	200	
Projected accomplishments	(269)	
10/1/99 balance	610	
Fiscal year 2000		
10/1/00 balance	610	
New needs 3/	175	
Projected accomplishments	(234)	
Projected 10/1/00 balance	551	

1/ Data source is Reforestation & TSI Needs Report (2400-K). This information is required by the National Forest Management Act of 1976, Section 4d(1).

2/ Projections in FY 1997 Report of the Forest Service.

3/ Actual or new needs are the results of timber harvests, regeneration failures, and natural disasters such as fires, storms, insects, diseases, and other changes. Includes actual and projected estimates of certified natural regeneration without site preparation.

**Table 17—Reforestation needs as of October 1, 1998, by State, national forest, and site productivity class 1/**

State, Commonwealth, or Territory 2/ National Forest	Acres by site productivity class 3/				Total acres
	0-49	50-84	85-119	120+	
Alabama					
NFs in Alabama (subtotal)	255	2,360	271	196	3,082
Alaska					
Chugach	0	0	0	0	0
Tongass-Chatham	1	126	1,025	1,671	2,823
Tongass-Ketchikan	10	172	1,651	16,750	18,583
Tongass-Stikine	45	80	145	1,193	1,463
Subtotal	56	378	2,821	19,614	22,869
Arizona					
Apache-Sitgreaves	5,085	2,422	116	0	7,623
Coconino	4,175	3,540	0	0	7,715
Coronado	8	0	0	0	8
Kaibab	5,988	1,278	0	0	7,266
Prescott	89	80	0	0	169
Tonto	1,688	187	0	0	1,875
Subtotal	17,033	7,507	116	0	24,656
Arkansas					
Ouachita	241	255	13,795	58	14,349
Ozark-St. Francis	1,184	11,352	1,769	82	14,387
Subtotal	1,425	11,607	15,564	140	28,736
California					
Angeles	304	801	311	0	1,416
Cleveland	0	122	0	0	122
Eldorado	0	0	402	1,233	1,635
Inyo	0	9	0	0	9
Klamath	364	2,011	2,074	1,352	5,801
Lake Tahoe Basin	0	47	727	453	1,227
Lassen	17	6,065	2,236	2,892	11,210
Los Padres	0	21	5	0	26
Mendocino	44	1,368	947	829	3,188
Modoc	0	3,272	88	66	3,426
Plumas	0	1,389	3,415	1,924	6,728
Rogue River	0	96	0	0	96
San Bernardino	346	389	29	0	764
Sequoia	52	155	1,861	958	3,026
Shasta	0	304	1,054	373	1,731
Sierra	34	553	1,396	2,635	4,618
Siskiyou	0	0	0	0	0

See footnotes at end of table.



**Table 17--Reforestation needs as of October 1, 1998, by State, national forest, and site productivity class 1/--Continued**

State, Commonwealth, or Territory 2/	Acres by site productivity class 3/				Total acres
	National Forest	0-49	50-84	85-119	120+
California (continued)					
Six Rivers	0	3	823	435	1,261
Stanislaus	2,134	14,006	30,956	18,948	66,044
Tahoe	79	171	2,611	2,014	4,875
Toiyabe/Humboldt	23	25	0	0	48
Trinity	0	105	64	50	219
Subtotal	3,397	30,912	48,999	34,162	117,470
Colorado					
Arapaho and Roosevelt	4,249	140	0	0	4,389
Grand Mesa, Uncompahgre, and Gunnison	7,151	2,634	209	0	9,994
Manti-La Sal	0	0	0	0	0
Medicine Bow and Routt	4,295	2,111	265	0	6,671
Pike and San Isabel	1,501	647	0	0	2,148
Rio Grande	2,945	2,304	190	0	5,439
San Juan	1,659	2,489	266	0	4,414
White River	622	378	113	0	1,113
Subtotal	22,422	10,703	1,043	0	34,168
Florida					
NFs in Florida (subtotal)	590	668	18	1,662	2,938
Georgia					
Chattahoochee and Oconee (subtotal)	0	27	2,583	793	3,403
Idaho					
Boise	6,283	32,955	7,058	2,107	48,403
Caribou	0	859	31	0	890
Challis	7	302	0	0	309
Clearwater	1,913	395	1,372	1,460	5,140
Idaho Panhandle	5,273	1,597	4,527	3,041	14,438
Nez Perce	641	628	2,612	673	4,554
Payette	725	1,378	2,750	4	4,857
Salmon	4,283	120	0	0	4,403
Sawtooth	244	284	0	0	528
Targhee	266	5,455	0	56	5,777
Subtotal	19,635	43,973	18,350	7,341	89,299
Illinois					
Shawnee (subtotal)	0	0	565	0	565

See footnotes at end of table.

**Table 17—Reforestation needs as of October 1, 1998, by State, national forest, and site productivity class 1/--Continued**

State, Commonwealth, or Territory 2/ National Forest	Acres by site productivity class 3/				Total acres
	0-49	50-84	85-119	120+	
Indiana					
Hoosier (subtotal)	0	278	436	288	1,002
Kentucky					
Daniel Boone (subtotal)	0	1,645	0	628	2,273
Louisiana					
Kisatchie (subtotal)	0	27	463	663	1,153
Maine					
White Mountain (subtotal)	126	110	68	24	328
Michigan					
Hiawatha	6,979	6,222	2,247	2	15,450
Huron-Manistee	13	2,095	0	11	2,119
Ottawa	1,027	12,060	4,818	123	18,028
Subtotal	8,019	20,377	7,065	136	35,597
Minnesota					
Chippewa	108	496	29	16	649
Superior	0	5,577	1,912	67	7,556
Subtotal	108	6,073	1,941	83	8,205
Mississippi					
NFs in Mississippi (subtotal)	72	534	77	465	1,148
Missouri					
Mark Twain (subtotal)	0	18,099	13	0	18,112
Montana					
Beaverhead & Deerlodge	1,206	411	112	0	1,729
Bitterroot	1,001	619	45	34	1,699
Custer	1,414	169	50	0	1,633
Flathead	1,541	1,013	1,099	46	3,699
Gallatin	385	1,076	0	0	1,461
Helena	1,592	480	13	0	2,085
Kootenai	2,534	3,932	3,250	416	10,132
Lewis and Clark	1,087	140	40	10	1,277
Lolo	4,996	2,006	1,041	346	8,389
Subtotal	15,756	9,846	5,650	852	32,104

See footnotes at end of table.

**Table 17--Reforestation needs as of October 1, 1998, by State, national forest, and site productivity class 1/--Continued**

State, Commonwealth, or Territory 2/ National Forest	Acres by site productivity class 3/				Total acres
	0-49	50-84	85-119	120+	
Nebraska					
Nebraska (subtotal)	0	0	0	0	0
Nevada					
Humboldt	0	0	0	0	0
Inyo	0	0	0	0	0
Lake Tahoe Basin	0	0	0	629	629
Toiyabe	0	0	0	0	0
Subtotal	0	0	0	629	629
New Hampshire					
White Mountain (subtotal)	1,985	6,289	2,546	1,188	12,008
New Mexico					
Carson	2,161	1,462	30	0	3,653
Cibola	39	35	0	0	74
Gila	1,767	502	0	0	2,269
Lincoln	56	722	40	0	818
Sante Fe	4,818	755	0	0	5,573
Subtotal	8,841	3,476	70	0	12,387
New York					
Green Mountain (subtotal)	0	0	11	8	19
North Carolina					
NFs in North Carolina (subtotal)	611	1,775	32	119	2,537
Ohio					
Wayne (subtotal)	171	129	885	1,381	2,566
Oklahoma					
Ouachita (subtotal)	0	0	0	393	393
Oregon					
Deschutes	6,305	465	45	20	6,835
Fremont	3,420	1,058	71	0	4,549
Klamath	10	0	40	98	148
Malheur	2,021	9,500	0	0	11,521
Mt. Hood	133	3,941	226	406	4,706
Ochoco	411	2,308	70	0	2,789
Rogue River	0	982	1,895	74	2,951
Siskiyou	69	32	607	193	901
Siuslaw	0	0	0	678	678
Umatilla	250	17,002	2,474	472	20,198

See footnotes at end of table.



**Table 17—Reforestation needs as of October 1, 1998, by State, national forest, and site productivity class 1/--Continued**

State, Commonwealth, or Territory 2/ National Forest	Acres by site productivity class 3/				Total acres
	0-49	50-84	85-119	120+	
Oregon (continued)					
Umpqua	68	129	1,310	72	1,579
Wallowa-Whitman	473	9,084	1,501	30	11,088
Willamette	48	670	255	4,058	5,031
Winema	221	2,936	1,674	0	4,831
Subtotal	13,429	48,107	10,168	6,101	77,805
Pennsylvania					
Allegheny (subtotal)	299	3,269	3,404	414	7,386
Puerto Rico					
Caribbean (subtotal)	0	0	41	118	159
South Carolina					
Francis Marion and Sumter (subtotal)	0	0	98	55	153
South Dakota					
Black Hills (subtotal)	32,043	6,016	6	64	38,129
Tennessee					
Cherokee (subtotal)	0	219	857	3,328	4,404
Texas					
NFs in Texas (subtotal)	0	1,513	49	753	2,315
Utah					
Ashley	2,302	0	0	0	2,302
Dixie	11,074	604	0	0	11,678
Fishlake	146	207	5	0	358
Manti-La Sal	0	654	19	0	673
Uinta	0	13	218	0	231
Wasatch-Cache	0	7	84	15	106
Subtotal	13,522	1,485	326	15	15,348
Vermont					
Green Mountain (subtotal)	3	936	32	10	981
Virginia					
George Washington and Jefferson (subtotal)	1,428	4,670	228	590	6,916

See footnotes at end of table.

**Table 17--Reforestation needs as of October 1, 1998, by State, national forest, and site productivity class 1/--Continued**

State, Commonwealth, or Territory 2/	Acres by site productivity class 3/				Total acres
National Forest	0-49	50-84	85-119	120+	
Washington					
Colville	862	1,081	789	120	2,852
Gifford Pinchot	92	583	938	350	1,963
Idaho Panhandle	218	0	63	0	281
Mt. Baker-Snoqualmie	0	163	384	238	785
Okanogan	6,440	583	995	0	8,018
Olympic	0	0	8	0	8
Umatilla	14	218	0	77	309
Wenatchee	10	9,920	976	253	11,159
Subtotal	7,636	12,548	4,153	1,038	25,375
West Virginia					
George Washington and Jefferson	42	25	10	149	226
Monongahela	49	652	842	535	2,078
Subtotal	91	677	852	684	2,304
Wisconsin					
Chequamegon	1,488	5,706	992	83	8,269
Nicolet	361	1,804	601	240	3,006
Subtotal	1,849	7,510	1,593	323	11,275
Wyoming					
Bighorn	2,532	46	0	0	2,578
Black Hills	13,253	7,859	38	0	21,150
Bridger-Teton	0	0	1,006	0	1,006
Medicine Bow and Routt	2,627	231	0	0	2,858
Shoshone	465	460	4	0	929
Targhee	0	0	0	0	0
Wasatch-Cache	17	126	0	0	143
Subtotal	18,894	8,722	1,048	0	28,664
Total	189,696	272,465	132,442	84,258	678,861

1/ Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec.4d(1).

2/ Unlisted States had no reforestation needs as of October 1, 1998.

3/ Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged stand.

Table 18--Reforestation and timber stand improvement acres certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/

State, Commonwealth, or Territory 2/	Reforestation						Timber Stand Improvement					Total Acres
	Artificial regeneration		Natural regeneration		Total	Cleaning	Release	Thinning	Fertilization	Pruning		
	Planted	Seeded	w/ site prep. 3/	w/o site prep. 3/								
National Forest												
Alabama												
NFs in Alabama (subtotal)	2,912	0	107	60	3,079	0	789	0	0	0	0	789
Alaska												
Chugach	0	0	0	0	0	0	0	0	0	0	0	0
Tongass-Chatham	64	0	0	1,567	1,631	0	0	671	0	21	692	692
Tongass-Ketchikan	162	0	0	5,202	5,364	0	0	617	0	0	617	617
Tongass-Stikine	169	0	0	3,077	3,246	0	0	1,175	0	124	1,299	1,299
Subtotal	395	0	0	9,846	10,241	0	0	2,463	0	145	2,608	2,608
Arizona												
Apache-Sitgreaves	0	0	0	3,418	3,418	0	0	358	0	0	358	358
Coconino	14	0	0	0	14	0	0	0	0	0	0	0
Coronado	0	0	0	0	0	0	0	0	0	0	0	0
Kaibab	414	0	126	1,313	1,853	0	0	0	0	0	0	0
Prescott	0	0	0	0	0	0	0	0	0	0	0	0
Tonto	0	0	0	53	53	0	0	0	0	0	0	0
Subtotal	428	0	126	4,784	5,338	0	0	358	0	0	358	358
Arkansas												
Ouachita	1,237	0	4,229	0	5,466	0	4,208	3,015	0	0	7,223	7,223
Ozark-St. Francis	0	0	922	405	1,327	0	727	0	0	0	727	727
Subtotal	1,237	0	5,151	405	6,793	0	4,935	3,015	0	0	7,950	7,950
California												
Angeles	0	0	0	0	0	0	360	451	0	303	1,114	1,114
Cleveland	0	0	0	0	0	0	0	0	0	0	0	0
Eldorado	0	0	0	0	0	0	2,709	1,687	0	0	4,396	4,396
Inyo	518	0	0	0	518	0	0	560	0	0	560	560

See footnotes at end of table.

Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--

Continued

State, Commonwealth, or Territory 2/ National Forest	Reforestation				Timber Stand Improvement							Total Acres	
	Artificial regeneration		Natural regeneration		Total	Cleaning	Release	Precomm.			Pruning		
	Planted	Seeded	w/ site prep. 3/	w/o site prep. 3/				Thinning	Fertilization				
California (continued)													
Klamath	6,167	0	3	1,456	7,626	0	2,516	2,765	0	0	5,281		
Lake Tahoe Basin	0	0	0	0	0	0	0	490	0	0	490		
Lassen	797	0	0	0	797	0	939	10,096	195	0	11,230		
Los Padres	0	0	0	0	0	0	0	0	0	0	0		
Mendocino	578	0	0	0	578	0	1,614	760	1,055	33	3,462		
Modoc	0	0	0	0	0	0	207	2,015	0	0	2,222		
Plumas	1,056	0	73	6	1,135	0	1,901	1,951	0	0	3,852		
Rogue River	466	0	0	0	466	0	0	0	0	0	0		
San Bernardino	0	0	0	0	0	0	21	80	21	13	135		
Sequoia	33	0	0	0	33	0	1,995	1,054	0	8	3,057		
Shasta	995	0	0	15	1,010	0	4,453	982	0	114	5,549		
Sierra	212	0	0	22	234	0	2,628	756	0	0	3,384		
Siskiyou	0	0	0	0	0	0	0	0	0	0	0		
Six Rivers	0	0	0	0	0	0	1,340	417	0	0	1,757		
Stanislaus	443	0	6	0	449	0	3,870	55	0	0	3,925		
Tahoe	504	0	281	297	1,082	0	6,374	7,359	0	0	13,733		
Toiyabe	0	0	0	0	0	0	0	350	0	0	350		
Trinity	357	0	0	0	357	0	1,858	694	0	0	2,552		
Subtotal	12,126	0	363	1,796	14,285	0	32,785	32,522	1,271	471	67,049		
Colorado													
Arapaho and Roosevelt	0	0	832	1,659	2,491	0	0	0	0	0	0		
Grand Mesa, Uncompahgre, and Gunnison	0	0	105	1,008	1,113	0	0	0	0	0	0		

See footnotes at end of table.



Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--  
Continued

State, Commonwealth, or Territory 2/	Reforestation				Timber Stand Improvement						Total Acres
	Artificial regeneration		Natural regeneration		Precomm.						
	Planted	Seeded	w/ site prep. 3/	w/o site prep. 3/	Cleaning	Release	Thinning	Fertilization	Pruning		
National Forest					Total						
Colorado (continued)											
Manti-La Sal	0	0	0	0	0	0	191	0	0	0	191
Medicine Bow and Routt	238	131	263	796	1,428	0	0	0	0	0	0
Pike and San Isabel	0	0	32	161	193	0	0	0	0	0	0
Rio Grande	0	0	0	1,382	1,382	0	0	0	0	0	0
San Juan	14	0	0	485	499	0	0	0	0	0	0
White River	115	0	0	751	866	0	543	0	0	0	543
Subtotal	367	131	1,232	6,242	7,972	0	734	0	0	0	734
Florida											
NFs in Florida (subtotal)	1,931	2,599	0	95	4,625	0	634	0	0	0	634
Georgia											
Chattahoochee and Oconee (subtotal)	1,383	0	1,475	0	2,858	0	1,852	1,474	0	0	3,326
Idaho											
Boise	3,750	0	0	186	3,936	0	402	3,690	0	0	4,092
Caribou	577	0	298	156	1,031	0	0	508	0	0	508
Challis	337	0	0	97	434	0	0	238	0	0	238
Clearwater	3,414	0	30	252	3,696	0	311	450	0	351	1,112
Idaho Panhandle	7,401	0	130	449	7,980	0	1,913	3,651	243	2,894	8,701
Kootenai	0	0	0	0	0	0	33	0	0	0	33
Nez Perce	1,453	0	600	293	2,346	0	0	921	0	128	1,049
Payette	4,172	0	33	0	4,205	0	0	1,262	0	0	1,262
Salmon	232	0	0	73	305	0	0	0	0	0	0
Sawtooth	0	0	0	0	0	0	0	0	0	0	0
Targhee	3,358	0	2,056	0	5,414	0	0	1,126	0	0	1,126
Subtotal	24,694	0	3,147	1,506	29,347	0	2,659	11,846	243	3,373	18,121
Illinois											
Shawnee (subtotal)	40	0	593	146	779	0	256	0	0	0	256

See footnotes at end of table.

Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--Continued

State, Commonwealth, or Territory 2/ National Forest	Reforestation					Timber Stand Improvement				
	Artificial regeneration		Natural regeneration			Precomm.				
	Planted	Seeded	w/ site prep. 3/	w/o site prep. 3/	Total	Cleaning	Release	Thinning	Fertilization	Pruning
Acres										
Kentucky										
Daniel Boone (subtotal)	429	0	396	0	825	0	419	103	0	44
Louisiana										
Kisatchie (subtotal)	2,046	0	1,433	0	3,479	0	1,474	689	0	0
Maine										
White Mountain (subtotal)	0	0	0	0	0	0	0	0	0	0
Michigan										
Hiawatha	417	45	2,786	1,199	4,447	0	1,074	57	0	448
Huron-Manistee	0	0	1,503	1,979	3,482	0	69	95	0	0
Ottawa	385	0	2,319	6,603	9,307	0	342	0	0	0
Subtotal	802	45	6,608	9,781	17,236	0	1,485	152	0	448
Minnesota										
Chippewa	449	76	2,414	213	3,152	0	110	0	0	55
Superior	395	192	0	8,092	8,679	0	726	0	0	305
Subtotal	844	268	2,414	8,305	11,831	0	836	0	0	360
Mississippi										
NFs in Mississippi (subtotal)	6,493	92	140	0	6,725	0	2,617	333	92	0
Missouri										
Mark Twain (subtotal)	346	0	4,923	1,590	6,859	0	1,286	4,879	0	0
Montana										
Beaverhead & Deerlodge	520	0	919	824	2,263	0	136	1,533	0	0
Bitterroot	2,336	0	0	21	2,357	0	284	412	0	0
Custer	1,240	0	472	60	1,772	0	0	189	0	0
Flathead	3,693	196	663	852	5,404	0	300	1,832	0	0
Gallatin	2,003	0	55	86	2,144	0	0	968	0	0

See footnotes at end of table.

Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--  
Continued

State, Commonwealth, or Territory 2/	Reforestation					Timber Stand Improvement						Total Acres	
	Artificial regeneration		Natural regeneration			Precommercial							
	Planted	Seeded	prep. 3/	w/ site prep. 3/	w/o site prep. 3/	Total	Cleaning	Release	Thinning	Fertilization	Pruning		
National Forest													
Montana (continued)													
Helena	524	0	129	0	653	0	0	400	0	0	400	0	400
Kootenai	9,911	0	1,215	14	11,140	0	484	3,779	0	0	4,263	0	4,263
Lewis and Clark	383	0	468	125	976	0	0	525	0	0	525	0	525
Lolo	2,809	0	475	167	3,451	0	533	1,749	0	0	2,282	0	2,282
Subtotal	23,419	196	4,396	2,149	30,160	0	1,737	11,387	0	0	13,124	0	13,124
Nebraska													
Nebraska (subtotal)	0	0	0	0	0	0	0	0	0	0	0	0	0
Nevada													
Humboldt	0	0	0	0	0	0	0	0	0	0	0	0	0
Inyo	0	0	0	0	0	0	0	0	0	0	0	0	0
Lake Tahoe Basin	0	0	0	0	0	0	0	220	0	0	220	0	220
Toiyabe	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	0	0	0	0	0	0	0	220	0	0	220	0	220
New Hampshire													
White Mountain (subtotal)	0	0	545	1,463	2,008	0	0	0	0	0	0	0	0
New Mexico													
Carson	47	0	36	1,052	1,135	0	239	598	0	0	837	0	837
Cibola	0	0	0	0	0	0	0	0	0	0	0	0	0
Gila	0	0	0	1,111	1,111	0	0	0	0	0	0	0	0
Lincoln	0	0	0	26	26	0	0	374	0	0	374	0	374
Sante Fe	0	0	0	254	254	0	0	0	0	0	0	0	0
Subtotal	47	0	36	2,443	2,526	0	239	972	0	0	1,211	0	1,211
New York													
Green Mountain (subtotal)	0	0	0	0	0	0	0	5	0	0	5	0	5

See footnotes at end of table.

**Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--**  
**Continued**

State, Commonwealth, or Territory 2/ National Forest	Reforestation					Timber Stand Improvement						Total Acres
	Artificial regeneration		Natural regeneration			Precomm.						
	Planted	Seeded	w/ site prep. 3/	w/ site prep. 3/	w/o site prep. 3/	Total	Cleaning	Release	Thinning	Fertilization	Pruning	
North Carolina												
NF's in North Carolina (subtotal)	919	0	664	0	0	583	0	1,737	218	0	18	1,973
Ohio												
Wayne (subtotal)	136	0	59	0	0	195	0	0	0	0	0	0
Oklahoma												
Ouachita (subtotal)	0	0	591	0	0	591	0	0	142	0	0	142
Oregon												
Deschutes	320	0	920	442	0	1,682	0	0	0	0	0	0
Fremont	2,747	0	0	252	0	2,999	0	0	665	0	0	665
Klamath	502	0	8	35	0	545	0	52	0	0	0	52
Malheur	4,300	0	0	59	0	4,359	0	0	0	0	0	0
Mt. Hood	5,502	0	0	288	0	5,790	0	0	1,272	0	0	1,272
Ochoco	1,192	0	0	16	0	1,208	0	0	0	0	0	0
Rogue River	1,335	0	0	99	0	1,434	0	0	0	0	0	0
Siskiyou	268	0	0	82	0	350	0	1,115	1,018	0	0	2,133
Siuslaw	0	0	0	0	0	0	0	3,504	810	0	0	4,314
Umatilla	2,183	0	629	4,309	0	7,121	0	0	1,902	0	0	1,902
Umpqua	2,207	0	0	0	0	2,207	0	0	785	0	95	880
Wallowa-Whitman	9,066	0	1,379	2,084	12,529	219	219	18	1,811	0	0	2,048
Willamette	4,726	0	0	815	5,541	0	0	428	4,678	1,242	777	7,125
Winema	937	0	0	0	0	937	0	0	1,282	0	0	1,282
Subtotal	35,285	0	2,936	8,481	46,702	219	219	5,117	14,223	1,242	872	21,673
Pennsylvania												
Allegheny (subtotal)	0	0	1,699	432	2,131	0	0	446	0	0	0	446
Puerto Rico												
Caribbean (subtotal)	0	0	0	0	0	0	0	0	0	0	0	0

See footnotes at end of table.



Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--  
Continued

State, Commonwealth, or Territory 2/ National Forest	Reforestation				Timber Stand Improvement							Total Acres
	Artificial regeneration		Natural regeneration		Total	Cleaning	Release	Precomm. Thinning	Fertilization	Pruning		
	Planted	Seeded	w/ site prep. 3/	w/o site prep. 3/								
South Carolina												
Francis Marion and Sumter (subtotal)	2,903	0	422	0	3,325	0	6,795	544	1,245	0	8,584	
South Dakota												
Black Hills (subtotal)	0	0	0	8,755	8,755	0	0	5,342	0	0	5,342	
Tennessee												
Cherokee (subtotal)	516	0	803	50	1,369	0	1,970	0	0	0	1,970	
Texas												
NFs in Texas (subtotal)	897	0	54	389	1,340	0	0	628	0	0	628	
Utah												
Ashley	0	0	0	2,468	2,468	0	0	429	0	0	429	
Dixie	539	0	0	0	539	0	388	1,578	0	0	1,966	
Fishlake	0	0	0	0	0	0	0	0	0	0	0	
Manti-La Sal	0	0	0	0	0	0	440	99	0	0	539	
Uinta	0	0	368	0	368	0	0	0	0	0	0	
Wasatch-Cache	0	0	239	694	933	0	0	0	0	0	0	
Subtotal	539	0	607	3,162	4,308	0	828	2,106	0	0	2,934	
Vermont												
Green Mountain (subtotal)	0	0	1,374	3	1,377	0	3	0	0	0	3	
Virginia												
George Washington and Jefferson (subtotal)	167	0	2,037	86	2,290	0	520	734	0	0	1,254	
Washington												
Colville	2,949	0	53	298	3,300	0	0	1,782	0	0	1,782	
Gifford Pinchot	1,969	0	0	152	2,121	0	438	2,087	0	0	2,525	
Idaho Panhandle	14	0	0	0	14	0	80	129	0	54	263	

See footnotes at end of table.

Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--Continued

State, Commonwealth, or Territory 2/	Reforestation				Timber Stand Improvement						
	Artificial regeneration		Natural regeneration		Total	Cleaning	Release	Precomm.			
	Planted	Seeded	w/ site prep. 3/	w/o site prep. 3/				Thinning	Fertilization	Pruning	
National Forest					Acres						Total Acres
Washington (continued)											
Mt. Baker-Snoqualmie	533	0	0	0	533	0	0	0	0	0	0
Okanogan	1,529	0	1,656	607	3,792	0	0	2,939	0	103	3,042
Olympic	0	0	0	44	44	0	0	787	0	0	787
Umatilla	319	0	0	173	492	0	0	498	0	0	498
Wenatchee	1,134	0	198	6,987	8,319	0	0	533	0	167	700
Subtotal	8,447	0	1,907	8,261	18,615	0	518	8,755	0	324	9,597
West Virginia											
George Washington and Jefferson	0	0	0	0	0	0	152	0	0	0	152
Monongahela	87	0	763	446	1,296	0	1,138	107	0	0	1,245
Subtotal	87	0	763	446	1,296	0	1,290	107	0	0	1,397
Wisconsin											
Chequamegon	311	54	1,113	885	2,363	0	240	0	0	100	340
Nicolet	264	0	480	696	1,440	0	272	0	0	0	272
Subtotal	575	54	1,593	1,581	3,803	0	512	0	0	100	612

See footnotes at end of table.

Table 18--Reforestation and timber stand improvement acreages certified as satisfactorily stocked by State and national forest--fiscal year 1998 1/--

State, Commonwealth, or Territory 2/	Continued									
	Reforestation					Timber Stand Improvement				
	Artificial regeneration		Natural regeneration			Precomm.				Total Acres
	Planted	Seeded	w/ site prep. 3/	w/o site prep. 3/	Total	Cleaning	Release	Thinning	Fertilization	
National Forest										
Wyoming										
Bighorn	86	0	382	506	974	0	0	0	0	0
Black Hills	0	0	0	295	295	0	0	0	0	0
Bridger-Teton	572	0	3	0	575	0	0	426	0	426
Medicine Bow and Routt	0	0	736	1,028	1,764	0	119	1,227	0	1,346
Shoshone	105	0	0	3,407	3,512	0	0	441	0	441
Targhee	40	0	50	0	90	0	0	0	0	0
Wasatch-Cache	0	0	327	129	456	0	0	0	0	0
Subtotal	803	0	1,498	5,365	7,666	0	119	2,094	0	2,213
Total	131,213	3,385	50,092	87,622	272,312	219	74,592	105,311	4,093	190,370

1/ Data source is Reforestation & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec.4d(1).

2/ Unlisted States had no reforestation needs as of October 1, 1998.

3/ Site productivity class refers to the amount of wood produced in cubic feet per acre per year in a natural unmanaged stand.

**Table 19—Certification of reforestation and timber stand improvement acreages by region—fiscal year 1998 1/**

Region	Reforestation				Timber Stand Improvement							Total Acres
	Artificial regeneration		Natural regeneration		Total	Cleaning	Release	Precomm.			Pruning	
	Planted	Seeded	w/ site prep. 3/	w/o site prep. 3/				Thinning	Fertilization			
Northern (R-1)	35,701	196	5,156	3,143	44,196	0	4,074	16,538	243	3,427	24,282	
Rocky Mountain (R-2)	558	131	2,350	20,233	23,272	0	662	7,010	0	0	7,672	
Southwest (R-3)	475	0	162	7,227	7,864	0	239	1,330	0	0	1,569	
Intermountain (R-4)	13,577	0	3,374	3,803	20,754	0	1,421	9,706	0	0	11,127	
Pacific Southwest (R-5)	12,162	0	371	1,831	14,364	0	32,837	32,392	1,271	471	66,971	
Pacific Northwest (R-6)	43,682	0	4,835	16,707	65,224	219	5,503	22,849	1,242	1,142	30,955	
Southern (R-8)	21,833	2,691	13,273	1,085	38,882	0	23,894	7,880	1,337	62	33,173	
Eastern (R-9)	2,830	367	20,571	23,747	47,515	0	5,962	5,143	0	908	12,013	
Alaska (R-10)	395	0	0	9,846	10,241	0	0	2,463	0	145	2,608	
Total	131,213	3,385	50,092	87,622	272,312	219	74,592	105,311	4,093	6,155	190,370	

1/ Data source is Reforestation & TSI Needs Report (2400-K) Table 21. This information is required by the National Forest Management Act of 1976, Section 4d(1).



**Table 20--Timber stand improvement expenditures and accomplishments by funding source--  
fiscal years 1994-98 1/**

	Appropriated	Knutson-Vandenberg	Total
1994			
Million dollars 2/	18.8	22.6	41.4
1,000 acres	131.6	131.4	263 3/
Constant dollars/acre	142.9	172.0	157.4 4/
1995			
Million dollars 2/	25.7	28.0	53.7
1,000 acres	140.7	132.6	273.3 5/
Constant dollars/acre	182.7	211.2	196.5 4/
1996			
Million dollars 2/	22.3	24.0	46.3
1,000 acres	130.4	128.4	258.8 6/
Constant dollars/acre	171.0	186.9	178.9 4/
1997			
Million dollars 2/	21.1	25.3	46.4
1,000 acres	118.9	139.0	257.9 7/
Constant dollars/acre	177.5	182.0	179.9 4/
1998			
Million dollars 2/	26.1	23.9	50.0
1,000 acres	167.8	129.0	296.8 8/
Constant dollars/acre	155.5	185.3	168.5 4/

1/ Data source for accomplishments is the Timber Activity Control System silviculture data base (TRACS/Silva) and the source for expenditures is the agency's financial data base at the National Finance Center.

2/ All previously published values have been converted to an obligations basis in 1998 constant dollars. No General Administration funds or law enforcement funds included. Does not include funds for nursery and tree improvement.

3/ Does not include 1,572 acres accomplished with contributed funding.

4/ Weighted average.

5/ Does not include 270 acres accomplished with contributed funding.

6/ Does not include 889 acres accomplished with contributed funding.

7/ Does not include 2,758 acres accomplished with contributed funding.

8/ Does not include 3,392 acres accomplished with contributed funding.



Table 21-- Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/

State, Commonwealth, or Territory 2/	Cubic foot productivity classes 3/					Total Acres	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
	0-49	50-84	85-119	120+						
National Forest										
Alabama										
NFs in Alabama (subtotal)	682	3,554	795	687	5,718	5,450	268	0	0	0
Alaska										
Chugach	0	13	374	0	387	13	374	0	0	0
Tongass-Chatham	0	112	588	12,183	12,883	150	12,733	0	0	0
Tongass-Ketchikan	14	138	1,400	22,015	23,567	54	23,513	0	0	0
Tongass-Stikine	0	0	197	847	1,044	0	958	0	0	86
Subtotal	14	263	2,559	35,045	37,881	217	37,578	0	0	86
Arizona										
Apache-Sitgreaves	9,575	1,152	20	0	10,747	15	10,732	0	0	0
Coconino	5,708	715	0	0	6,423	169	6,254	0	0	0
Coronado	6	64	0	0	70	0	70	0	0	0
Kaibab	5,459	356	0	0	5,815	0	5,815	0	0	0
Prescott	56	0	0	0	56	56	0	0	0	0
Tonto	4,335	1,436	31	0	5,802	5,257	545	0	0	0
Subtotal	25,139	3,723	51	0	28,913	5,497	23,416	0	0	0
Arkansas										
Ouachita	53	1,029	476	459	2,017	1,817	200	0	0	0
Ozark-St. Francis	0	8,670	0	70	8,740	4,151	4,589	0	0	0
Subtotal	53	9,699	476	529	10,757	5,968	4,789	0	0	0
California										
Angeles	685	1,859	440	0	2,984	1,717	609	0	658	0
Cleveland	0	689	0	0	689	511	177	0	1	0
Eldorado	0	51	3,114	12,126	15,291	11,193	4,084	14	0	0
Inyo	0	98	0	0	98	19	79	0	0	0

See footnotes at end of table.



Table 21--Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/--

## Continued

State, Commonwealth, or Territory 2/	Cubic foot productivity classes 3/					Total Acres	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
	0-49	50-84	85-119	120+						
National Forest										
California (continued)										
Klamath	852	22,966	30,730	19,069	73,617	34,482	39,092	34	9	
Lake Tahoe Basin	800	2,329	2,962	492	6,583	3,635	2,948	0	0	
Lassen	1,542	21,435	10,510	2,020	35,507	5,507	29,987	13	0	
Los Padres	0	138	0	0	138	72	41	0	25	
Mendocino	13	18,243	14,340	38,788	71,384	42,761	24,298	4,322	3	
Modoc	39	11,041	3,798	543	15,421	6,806	7,873	727	15	
Plumas	59	3,732	9,810	7,821	21,422	7,281	14,141	0	0	
Rogue River	0	443	0	0	443	421	22	0	0	
San Bernardino	272	2,577	107	66	3,022	1,246	1,741	0	35	
Sequoia	156	1,364	4,214	7,102	12,836	7,821	4,048	672	295	
Shasta	0	774	1,441	5,008	7,223	5,876	1,347	0	0	
Sierra	321	2,705	9,739	18,170	30,935	16,994	13,482	0	459	
Siskiyou	0	0	1,766	0	1,766	809	758	199	0	
Six Rivers	0	114	5,698	14,440	20,252	12,571	7,681	0	0	
Stanislaus	35	1,230	12,009	47,313	60,587	41,324	19,263	0	0	
Tahoe	1,089	4,185	23,847	28,509	57,630	24,487	32,753	360	30	
Toiyabe	611	737	30	0	1,378	0	1,378	0	0	
Trinity	327	13,531	12,835	7,776	34,469	8,154	26,315	0	0	
Subtotal	6,801	110,241	147,390	209,243	473,675	233,687	232,117	6,341	1,530	
Colorado										
Arapaho and Roosevelt	2,553	0	0	0	2,553	282	2,271	0	0	
Grand Mesa, Uncompahgre, and Gunnison	3,411	344	0	0	3,755	520	3,235	0	0	
Manti-La Sal	0	90	95	0	185	0	185	0	0	
Medicine Bow and Routt	8,326	1,730	50	0	10,106	2,836	7,270	0	0	
Pike and San Isabel	1,009	280	0	0	1,289	920	369	0	0	

See footnotes at end of table.



Table 21-- Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/--  
Continued

State, Commonwealth, or Territory 2/	Cubic foot productivity classes 3/					Total Acres	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
	0-49	50-84	85-119	120+						
National Forest										
Colorado (continued)										
Rio Grande	70	78	0	0	148		78	70	0	0
San Juan	1,827	1,172	0	0	2,999		2,779	220	0	0
White River	167	1,025	282	0	1,474		1,397	77	0	0
Subtotal	17,363	4,719	427	0	22,509		8,812	13,697	0	0
Florida										
NFs in Florida (subtotal)	838	446	677	41	2,002		550	392	1,060	0
Georgia										
Chattahoochee and Oconee (subtotal)	0	0	4,541	2,718	7,259		1,246	4,913	1,100	0
Idaho										
Boise	1,007	8,048	7,488	1,110	17,653		1,518	16,135	0	0
Caribou	0	312	47	0	359		0	359	0	0
Challis	6,981	622	0	0	7,603		5,359	2,244	0	0
Clearwater	943	66	665	2,422	4,096		647	2,168	0	1,281
Idaho Panhandle	25,351	11,663	46,385	48,976	132,375		8,421	100,622	3,474	19,858
Kootenai	36	0	9	35	80		0	80	0	0
Nez Perce	2,948	4,787	21,402	11,940	41,077		405	40,657	15	0
Payette	411	2,732	2,688	22	5,853		1,142	4,711	0	0
Salmon	6,806	914	0	0	7,720		4,246	3,474	0	0
Sawtooth	426	41	0	0	467		152	315	0	0
Targhee	11	14,181	0	0	14,192		0	14,192	0	0
Subtotal	44,920	43,366	78,684	64,505	231,475		21,890	184,957	3,489	21,139
Illinois										
Shawnee (subtotal)	0	50	453	0	503		450	0	0	53
Indiana										
Hoosier (subtotal)	0	0	313	727	1,040		755	285	0	0

See footnotes at end of table.

Table 21--Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/--

Continued

State, Commonwealth, or Territory 2/	Cubic foot productivity classes 3/					Total Acres	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
	0-49	50-84	85-119	120+						
National Forest										
Kentucky										
Daniel Boone (subtotal)	19	746	2,717	204	3,686	410	3,244	0	32	
Louisiana										
Kisatchie (subtotal)	0	1,083	3,029	2,520	6,632	2,447	4,185	0	0	
Maine										
White Mountain (subtotal)	6	36	15	13	70	11	59	0	0	
Michigan										
Hiawatha	779	6,558	3,450	42	10,829	4,269	1,186	0	5,374	
Huron-Manistee	1,260	1,936	296	0	3,492	727	2,706	0	59	
Ottawa	185	743	296	66	1,290	1,290	0	0	0	
Subtotal	2,224	9,237	4,042	108	15,611	6,286	3,892	0	5,433	
Minnesota										
Chippewa	776	11,788	4,895	14	17,473	6,609	0	0	10,864	
Superior	2,548	0	0	0	2,548	2,548	0	0	0	
Subtotal	3,324	11,788	4,895	14	20,021	9,157	0	0	10,864	
Mississippi										
NFs in Mississippi (subtotal)	382	333	2,960	3,059	6,734	4,813	1,627	294	0	
Missouri										
Mark Twain (subtotal)	0	15,778	186	0	15,964	1,315	14,574	0	75	
Montana										
Beaverhead & Deerlodge	25,445	15,134	1,482	127	42,188	225	41,963	0	0	
Bitterroot	5,601	10,091	5,048	218	20,958	2,963	17,995	0	0	
Custer	1,367	5	54	0	1,426	114	1,312	0	0	
Flathead	14,738	12,294	39,710	8,016	74,758	604	73,403	0	751	
Gallatin	469	5,345	0	0	5,814	221	5,593	0	0	
Helena	930	576	428	70	2,004	1	1,993	10	0	
Idaho Panhandle	10	0	213	347	570	0	501	0	69	

See footnotes at end of table.

Table 21--Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/--  
Continued

State, Commonwealth, or Territory 2/	Cubic foot productivity classes 3/					Total Acres	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
	0-49	50-84	85-119	120+						
National Forest										
Montana (continued)										
Kootenai	7,367	32,836	37,582	1,315	79,100		918	78,146	0	36
Lewis and Clark	2,783	1,604	861	6	5,254		51	5,203	0	0
Lolo	3,817	8,712	7,987	1,493	22,009		858	21,144	0	7
Subtotal	62,527	86,597	93,365	11,592	254,081		5,955	247,253	10	863
Nebraska										
Nebraska (subtotal)	0	0	0	0	0		0	0	0	0
Nevada										
Humboldt	0	0	0	0	0		0	0	0	0
Inyo	0	0	0	0	0		0	0	0	0
Lake Tahoe Basin	0	0	0	324	324		0	324	0	0
Toiyabe	0	0	0	0	0		0	0	0	0
Subtotal	0	0	0	324	324		0	324	0	0
New Hampshire										
White Mountain (subtotal)	111	121	67	24	323		16	307	0	0
New Mexico										
Carson	2,828	1,452	322	0	4,602		880	3,722	0	0
Cibola	2,306	0	0	0	2,306		0	2,306	0	0
Gila	3,294	480	0	0	3,774		0	3,774	0	0
Lincoln	127	1,681	39	0	1,847		95	1,752	0	0
Sante Fe	8,584	819	0	0	9,403		481	8,922	0	0
Subtotal	17,139	4,432	361	0	21,932		1,456	20,476	0	0
New York										
Green Mountain (subtotal)	0	58	653	0	711		58	653	0	0
North Carolina										
NFs in North Carolina (subtotal)	650	1,934	514	2,914	6,012		3,245	1,891	876	0

See footnotes at end of table.

Table 21--Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/--

Continued

State, Commonwealth, or Territory 2/	Cubic foot productivity classes 3/					Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
	0-49	50-84	85-119	120+	Total Acres				
National Forest									
Ohio									
Wayne (subtotal)	26	530	1,001	2,528	4,085	1,455	1,292	0	1,338
Oklahoma									
Ouachita (subtotal)	0	35	227	207	469	302	167	0	0
Oregon									
Deschutes	20,921	6,229	610	399	28,159	3,604	19,297	71	5,187
Fremont	8,513	3,370	879	0	12,762	2,171	10,591	0	0
Klamath	12	208	607	895	1,722	900	822	0	0
Malheur	3,405	3,677	0	0	7,082	816	6,238	0	28
Mt. Hood	31	18,911	10,989	1,845	31,776	618	16,919	11,824	2,415
Ochoco	7,208	7,298	12	0	14,518	370	12,570	0	1,578
Rogue River	0	3,808	24,318	1,375	29,501	5,204	15,325	2,967	6,005
Siskiyou	68	699	16,056	3,597	20,420	4,270	3,831	6,445	5,874
Siuslaw	0	0	0	6,300	6,300	2,900	2,540	0	860
Umatilla	302	6,244	1,702	499	8,747	148	8,540	0	59
Umpqua	0	6,595	29,565	10,508	46,668	766	26,369	16,611	2,922
Wallowa-Whitman	15,597	49,633	3,882	0	69,112	7,898	60,293	0	921
Willamette	81	5,339	59,430	89,945	154,795	13,261	33,377	74,652	33,505
Winema	3,795	12,787	3,903	0	20,485	1,000	19,215	0	270
Subtotal	59,933	124,798	151,953	115,363	452,047	43,926	235,927	112,570	59,624
Pennsylvania									
Allegheny (subtotal)	144	1,382	1,100	573	3,199	3,199	0	0	0
Puerto Rico									
Caribbean (subtotal)	0	300	798	0	1,098	498	600	0	0
South Carolina									
Francis Marion and Sumter (subtotal)	0	75	4,726	756	5,557	3,075	200	2,282	0

See footnotes at end of table.



Table 21-- Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/--  
Continued

State, Commonwealth, or Territory 2/	Cubic foot productivity classes 3/					Total Acres	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
	0-49	50-84	85-119	120+						
National Forest										
South Dakota										
Black Hills (subtotal)	3,904	402	0	0	4,306	0	4,306	0	0	0
Tennessee										
Cherokee (subtotal)	5	1,524	447	2,006	3,982	3,129	853	0	0	0
Texas										
NFs in Texas (subtotal)	0	702	1,691	1,442	3,835	3,254	581	0	0	0
Utah										
Ashley	8,252	0	0	0	8,252	0	8,252	0	0	0
Dixie	3,380	1,253	0	0	4,633	1,155	3,478	0	0	0
Fishlake	520	205	0	0	725	725	0	0	0	0
Manti-La Sal	69	367	1,331	200	1,967	0	1,967	0	0	0
Uinta	0	233	45	0	278	278	0	0	0	0
Wasatch-Cache	171	526	0	0	697	146	551	0	0	0
Subtotal	12,392	2,584	1,376	200	16,552	2,304	14,248	0	0	0
Vermont										
Green Mountain (subtotal)	744	855	109	0	1,708	450	1,258	0	0	0
Virginia										
George Washington and Jefferson (subtotal)	668	6,589	1,043	1,671	9,971	2,618	7,290	0	63	63
Washington										
Colville	487	4,919	8,088	744	14,238	1,165	12,568	0	505	505
Gifford Pinchot	0	16,929	34,629	7,810	59,368	355	34,485	14,114	10,414	10,414
Idaho Panhandle	1,333	392	4,555	2,417	8,697	126	8,555	0	16	16
Mt. Baker-Snoqualmie	0	40	2,936	1,732	4,708	61	2,865	1,488	294	294
Okanogan	24,642	4,662	769	0	30,073	3,712	25,372	0	989	989

See footnotes at end of table.

Table 21--Timber stand improvement needs as of October 1, 1998, by State, national forest, cubic foot productivity class, and type of treatment 1/--

Continued

State, Commonwealth, or Territory 2/	Cubic foot productivity classes 3/					Total Acres	Release subtotal	Thinning subtotal	Fertilization subtotal	Pruning subtotal
	0-49	50-84	85-119	120+						
National Forest										
Washington (continued)										
Olympic	0	621	15,542	1,306	17,469	84	14,206	2,589	590	
Umatilla	105	6,859	111	24	7,099	100	6,645	0	354	
Wenatchee	1,136	18,539	3,616	2,683	25,974	3,502	14,267	6,353	1,852	
Subtotal	27,703	52,961	70,246	16,716	167,626	9,105	118,963	24,544	15,014	
West Virginia										
George Washington and Jefferson	202	130	0	209	541	518	23	0	0	
Monongahela	91	641	965	569	2,266	1,640	626	0	0	
Subtotal	293	771	965	778	2,807	2,158	649	0	0	
Wisconsin										
Chequamegon	246	896	312	185	1,639	1,539	0	0	100	
Nicolet	173	798	636	0	1,607	1,234	223	0	150	
Subtotal	419	1,694	948	185	3,246	2,773	223	0	250	
Wyoming										
Bighorn	13,214	362	0	0	13,576	2,683	10,893	0	0	
Black Hills	688	322	0	0	1,010	0	1,010	0	0	
Bridger-Teton	0	36	680	0	716	0	716	0	0	
Medicine Bow and Routt	7,040	162	13	0	7,215	364	6,851	0	0	
Shoshone	147	108	0	0	255	153	102	0	0	
Targhee	43	87	0	0	130	0	130	0	0	
Wasatch-Cache	232	27	0	0	259	0	259	0	0	
Subtotal	21,364	1,104	693	0	23,161	3,200	19,961	0	0	
Total	309,787	504,510	586,493	476,692	1,877,482	401,137	1,207,415	152,566	116,364	

1/ Data source is Refor. & TSI Needs Report (2400-K) Table 1. This information is required by the National Forest Management Act of 1976, Sec.4d(1).

2/ Unlisted States had no reforestation needs as of October 1, 1998.

3/ Cubic foot productivity class refers to the cubic feet of wood produced per acre per year in a natural unmanaged stand.

**Table 22--Timber stand improvement program needs--fiscal years 1998-2000 1/**

	Current and Projected 1,000 acres	Prior Year Projected 2/ 1,000 acres
Fiscal year 1998		
10/1/97 balance	1,821	1,821
New needs	355	400
Actual accomplishments	(300)	(260)
10/1/98 balance	1,876	1,961
Fiscal year 1999		
10/1/98 balance	1,876	
New needs	375	
Projected accomplishments	(219)	
10/1/99 balance	2,032	
Fiscal year 2000		
10/1/99 balance	2,032	
New needs	350	
Projected accomplishments	(233)	
Projected 10/1/00 balance 3/	2,149	

1/ Data source is Reforestation & TSI Needs Report (2400-K). This information is required by the National Forest Management Act of 1976, Section 4d(1).

2/ Projections in FY 1997 Report of the Forest Service.

3/ This represents over 9 years of future projected accomplishments.

**Table 23--Fuels treatment acreage accomplished by appropriation--fiscal year 1998**

Region	Accomplishment		Total
	Fire preparedness	Brush disposal funds	
Northern (R-1)	117,062	19,202	136,264
Rocky Mountain (R-2)	52,422	4,834	57,256
Southwestern (R-3)	106,715	7,526	114,241
Intermountain (R-4)	80,491	5,967	86,458
Pacific Southwest (R-5)	76,629	20,777	97,406
Pacific Northwest (R-6)	109,302	53,155	162,457
Southern (R-8)	932,021	0	932,021
Eastern (R-9)	14,422	4,042	18,464
Alaska (R-10)	229	0	229
Total	1,489,293	115,503	1,604,796



**Table 24--Acres of State and private lands burned--calendar year 1997**

State, Commonwealth, or Territory	Lightning fires <i>Number</i>	Person-caused fires <i>Number</i>	Total fires <i>Number</i>	Acres burned <i>Number</i>
Alabama	12	2,988	3,000	23,933
Alaska	141	421	562	1,058,911
Arizona	87	347	434	4,426
Arkansas	34	1,233	1,267	13,925
California	251	6,552	6,803	61,562
Colorado	169	1,436	1,605	16,703
Connecticut	1	88	89	611
Delaware	2	40	42	515
Florida	525	3,502	4,027	146,146
Georgia	182	7,220	7,402	22,483
Guam	0	516	516	934
Hawaii	2	67	69	378
Idaho	121	133	254	13,241
Illinois	0	296	296	1,078
Indiana	6	843	849	2,426
Iowa	6	2,551	2,557	4,261
Kansas	166	5,003	5,169	75,110
Kentucky	0	913	913	14,475
Louisiana	10	1,953	1,963	14,254
Maine	31	628	659	910
Maryland	22	534	556	1,833
Massachusetts	10	3,799	3,809	4,457
Michigan	16	487	503	2,066
Minnesota	13	1,850	1,863	17,065
Mississippi	10	2,169	2,179	23,801
Missouri	11	2,351	2,362	19,142
Montana	364	214	578	3,430
Nebraska	84	1,099	1,183	23,458
Nevada	27	48	75	418
New Hampshire	14	712	726	348
New Jersey	25	1,523	1,548	4,928
New Mexico	154	457	611	132,790
New York	16	294	310	1,218
North Carolina	124	4,412	4,536	15,734
North Dakota	73	718	791	16,503
Ohio	5	952	957	4,698
Oklahoma	7	1,374	1,381	34,552
Oregon	266	550	816	1,661
Pennsylvania	27	940	967	4,022
Puerto Rico	0	0	0	0
Rhode Island	1	113	114	120
South Carolina	34	3,170	3,204	21,729
South Dakota	36	125	161	2,564

Table 24--Acres of State and private lands burned--calendar year 1997

State, Commonwealth, or Territory	Lightning fires <i>Number</i>	Person-caused fires <i>Number</i>	Total fires <i>Number</i>	Acres burned <i>Number</i>
Tennessee	10	1,421	1,431	12,746
Texas	15	635	650	8,446
Utah	198	193	391	12,007
Vermont	2	142	144	236
Virginia	38	1,204	1,242	5,006
Washington	119	538	657	4,650
West Virginia	3	749	752	8,031
Wisconsin	15	1,854	1,869	2,600
Wyoming	291	447	738	20,016
Total	3,776	71,804	75,580	1,886,557

Table 25--Status of NFS acres within grazing allotments with range vegetation management objectives--fiscal year 1998

Region	Total number of allotments	Acres with range vegetation management objectives	Acres meeting or moving toward FP objectives	Acres not meeting or moving toward FP objectives	Acres of undetermined status	Acres monitored in FY 1998
Northern (R-1)	1,552	4,634,797	3,878,594	768,887	0	1,310,459
Rocky Mountain (R-2)	2,221	11,518,142	8,729,033	545,078	2,242,771	2,881,654
Southwest (R-3)	1,393	18,037,916	11,475,325	3,931,528	2,636,063	6,181,724
Intermountain (R-4)	1,706	19,547,296	15,323,356	1,353,981	2,799,421	5,224,344
Pacific Southwest (R-5)	731	7,111,395	3,629,212	179,148	3,305,035	2,006,051
Pacific Northwest (R-6)	711	10,252,719	7,370,236	290,202	2,587,964	2,823,446
Southern (R-8)	454	1,169,953	928,331	177,313	64,642	251,176
Eastern (R-9)	15	64,835	60,933	22	3,880	50,349
Total	8,783	72,337,053	51,395,020	7,246,159	13,639,776	20,729,203

Table 25--Status of NFS acres within grazing allotments with range vegetation management objectives--fiscal year 1998--

Continued

Region	Total riparian acres	Riparian acres meeting or moving toward FP objectives	Riparian acres not meeting or moving toward FP objectives	Riparian acres of undetermined status	Riparian acres monitored in FY 1998
Northern (R-1)	193,904	142,175	49,457	2,272	56,262
Rocky Mountain (R-2)	517,620	355,841	36,880	124,899	116,495
Southwest (R-3)	244,519	154,670	59,249	30,600	78,557
Intermountain (R-4)	620,770	489,984	63,065	67,721	185,600
Pacific Southwest (R-5)	354,209	198,159	18,991	137,059	87,473
Pacific Northwest (R-6)	474,905	312,927	27,498	134,480	116,312
Southern (R-8)	59,785	31,011	2,301	26,473	2,886
Eastern (R-9)	860	860	0	0	860
Total	2,466,572	1,685,627	257,441	523,504	644,445



Table 26--Pesticide use report-fiscal year 1998

Common Name	Management Objective	Treatment Unit	Units Treated	Quantity Used Pounds 1/
Fungicides and Fumigants:				
Basamid	Soil Fumigation	Acres	13.71	4,704.00
Benomyl	Nursery Disease Control	Acres	47.01	46.01
Borax	Disease Control	Acres	544.00	410.00
	Fungus Control	Acres	37,706.50	28,871.00
	Seed Orchard Protection	Acres	7.00	5.00
Carboxin/Thiram	Nursery Disease Control	Square Ft	300.00	.48
Chloropicrin	Nursery Disease Control	Acres	17.70	7,060.00
	Soil Fumigation	Acres	5.50	834.50
Chlorothalonil	Disease Control	Acres	30.75	4.90
	Nursery Disease Control	Acres	16.09	65.64
	Seed Orchard Protection	Trees	400.00	2.00
Daconil	Fungus Control	Acres	38.25	57.38
	Seed Orchard Protection	Acres	10.00	.05
Dazomet	Nursery Disease Control	Acres	49.30	17,400.00
	Soil Fumigation	Acres	11.32	3,997.62
Dicloran	Nursery Disease Control	Acres	.69	.75
	Nursery Disease Control	Square Ft	47,392.00	10.76
Dimethyl benzyl	Nursery Disease Control	Acres	.20	.50
Iprodione	Nursery Disease Control	Acres	3.05	3.86
Metalaxyl	Nursery Disease Control	Square Ft	1,096.00	1.02
Methyl bromide	Nursery Disease Control	Acres	68.00	18,763.00
	Soil Fumigation	Acres	1.75	1,683.15
Propiconazole	Fungus Control	Acres	21.83	3.43
	Nursery Disease Control	Acres	50.15	1.35
Syllit	Fungus Control	Acres	7.00	9.10
Thiophanate-methyl	Fungus Control	Acres	95.50	47.75
	Nursery Disease Control	Acres	6.30	3.40
	Nursery Disease Control	Square Ft	90,952.00	9.00
Thiram	Nursery Disease Control	Lbs. of Seed	103.00	4.31
Triadimefon	Nursery Disease Control	Acres	30.00	16.79
	Nursery Disease Control	Lbs. of Seed	199.00	.50
	Nursery Disease Control	Square Ft	396.00	.02
Vinclozolin	Nursery Disease Control	Square Ft	13,432.00	1.80
Total 1998 Fungicides and Fumigants:		Acres	38,781.60	
		Lbs. of Seed	302.00	
		Square Ft	153,568.00	
		Trees	400.00	
				84,019.14 lbs

Table 26--Pesticide use report-fiscal year 1998--Continued

Common Name	Management Objective	Treatment Unit	Units Treated	Quantity Used Pounds 1/
Herbicides, Algicides, and Plant Growth Regulators:				
2,4-D	Agricultural Weed Control	Acres	58.70	85.06
	Conifer Release	Acres	.00	4.00
	Housekeeping/Facilities Mtc	Acres	8.00	11.65
	Noxious Weed Control	Acres	9,199.27	8,931.82
	Nursery Weed Control	Acres	30.00	7.90
	Right-of-Way Veg Mgmt	Acres	1.00	97.30
	Seed Orchard Protection	Acres	81.60	140.20
Bromacil	Housekeeping/Facilities Mtc	Acres	6.50	10.90
	Right-of-Way Veg Mgmt	Acres	2.50	6.00
Chlorsulfuron	Noxious Weed Control	Acres	111.00	9.84
Chorothalonil	Nursery Disease Control	Acres	23.00	34.50
Clopyralid	Housekeeping/Facilities Mtc	Acres	25.00	7.50
	Noxious Weed Control	Acres	4,159.10	850.79
	Right-of-Way Veg Mgmt	Acres	8.00	5.58
Dicamba	Noxious Weed Control	Acres	6,550.17	1,953.89
	Noxious Weed Control	Lbs. of Seed	.00	10.04
	Nursery Weed Control	Acres	2.25	2.25
Dimethyl phenylenebis	Noxious Weed Control	Acre	28.14	11.70
	Nursery Disease Control	Acres	1.00	.25
Diuron	Housekeeping/Facilities Mtc	Acres	626.50	19.70
	Right-of-Way Veg Mgmt	Acres	40.00	192.00
Flumetsulam	Noxious Weed Control	Acres	.00	.21
	Right-of-Way Veg Mgmt	Acres	5.58	1.96
Fosamine ammonium	Noxious Weed Control	Acres	78.70	40.89
	Right-of-Way Veg Mgmt	Acres	34.00	1,259.20
Glyphosate	Agricultural Weed Control	Acres	2,080.00	129.00
	Animal Damage Control	Acres	.30	.30
	Aquatic Weed Control	Acres	.50	1.00
	Conifer Release	Acres	6,324.00	11,711.40
	Hardwood Control	Acres	89.00	64.00
	Housekeeping/Facilities Mtc	Acres	402.30	617.34
	Noxious Weed Control	Acres	1,076.46	481.23
	Nursery Weed Control	Acres	492.00	1,235.10
	Recreation Improve	Acres	2.00	4.50
	Right-of-Way Veg Mgmt	Acres	273.75	636.99
	Seed Orchard Protection	Acres	155.35	269.38
	Site Preparation	Acres	4,292.30	9,546.39
	Site Preparation	Lbs. of Seed	147.00	81.00
	Wildlife Habitat Improve	Acres	307.60	1,249.52
	Nursery Weed Control	Acres	.50	.03
Halosulfonmethyl Hexazinone	Animal Damage Control	Acres	.30	.45
	Conifer Release	Acres	1,963.00	3,455.20
	Housekeeping/Facilities Mtc	Acres	41.5	.18
	Research	Acres	23.00	12.50
	Site Preparation	Acres	5,719.00	12,289.60

Table 26--Pesticide use report-fiscal year 1998--Continued

Common Name	Management Objective	Treatment Unit	Units Treated	Quantity Used Pounds 1/
Imazapyr	Conifer Release	Acres	1,810.00	274.00
	Conifer/Hardwood Release	Acres	591.00	31.60
	Housekeeping/Facilities Mtc	Acres	12.00	4.00
	Noxious Weed Control	Acres	5.00	6.00
	Right-of-Way Veg Mgmt	Acres	72.40	41.10
	Site Preparation	Acres	1,802.00	687.96
Imidazole	Noxious Weed Control	Acres	90.00	54.53
Metsulfuron-methyl	Noxious Weed Control	Acres	2,909.31	100.57
Oryzalin	Noxious Weed Control	Acres	.00	1.00
Oxyfluorfen	Housekeeping/Facilities Mtc	Acres	2.50	1.00
	Nursery Weed Control	Acres	222.74	325.16
Paraquat	Housekeeping/Facilities Mtc	Acres	5.00	.63
Picloram	Agricultural Weed Control	Acres	141.00	12.50
	Noxious Weed Control	Acres	30,667.28	12,248.95
Prometon	Recreation Improve	Acres	2.00	1.50
Rhinocyllus conicus	Noxious Weed Control	Trtmnt Stations	500.00	500.00Insects
Sethoxydim	Nursery Weed Control	Acre	38.56	41.01
Simazine	Nursery Weed Control	Acres	15.98	4.20
Sodium Bentazon	Nursery Weed Control	Acres	.10	.06
Sulfometuron-methyl	Conifer Release	Acres	.00	16.80
	Housekeeping/Facilities Mtc	Acres	5.00	5.00
	Noxious Weed Control	Acres	9.20	.56
	Right-of-Way Veg Mgmt	Acres	.00	6.00
	Site Preparation	Acres	478.00	190.44
Tebuthiuron	Noxious Weed Control	Acres	5.00	.60
Triclopyr	Agricultural Weed Control	Acres	300.00	200.00
	Conifer Release	Acres	6,525.00	6,587.20
	Conifer/Hardwood Release	Acres	117.00	135.00
	Conifer/Hardwood Thinning	Acres	109.00	81.00
	Hardwood Control	Acres	1,217.00	866.70
	Housekeeping/Facilities Mtc	Acres	128.50	96.00
	Noxious Weed Control	Acres	118.50	388.67
	Research	Acres	74.30	27.06
	Right-of-Way Veg Mgmt	Acres	368.00	818.00
	Seed Orchard Protection	Acres	.40	.70
	Site Preparation	Acres	10,244.00	9,237.25
	Wildlife Habitat Improve	Acres	1,918.00	680.90
Total 1998 Herbicides, Algicides, Plant Growth Reg.:		Acres	105,758.54	
		Lbs. of Seed	147.00	
		Trtmnt Stations	500.00	
				500.00 Insects
				90,075.38 lbs

Table 26--Pesticide use report-fiscal year 1998--Continued

Common Name	Management Objective	Treatment Unit	Units Treated	Quantity Used Pounds 1/
Insecticides, Acaricides, and Pheromones:				
Acephate	Housekeeping/Facilities Mtc	Acres	.50	.11
	Insect Suppression	Acres	5.00	12.00
	Insect Suppression	Square Ft	1,108.00	.13
	Nursery Insect Control	Acres	5.00	3.75
	Nursery Insect Control	Ribes Plants	712.00	.15
	Nursery Insect Control	Square Ft	8,512.00	.50
Bacillus thuringiensis	Insect Eradication	Acres	1,615.00	10,260.00 BIU
	Nursery Insect Control	Acres	.20	16.00 BIU
	Seed Orchard Protection	Acres	13.00	80.00 BIU
Bifenthrin	Insect Eradication	Acres	16.00	2.00
	Insect Suppression	Square Ft	1,864.00	.08
Carbaryl	Insect Suppression	Acres	120.00	225.40
	Nursery Insect Control	Acres	3.00	5.40
	Nursery Insect Control	Seedlings	56,500.00	.75
	Seed Orchard Protection	Acres	8.00	4.10
Chlorpyrifos	Insect Eradication	Acres	16.00	2.00
	Insect Suppression	Acres	14.00	20.21
	Nursery Insect Control	Acres	18.83	15.33
Coumaphos	Insect Suppression	Head of Cattle	3,800.00	2.00
Crop oil	Insect Suppression	Acres	40.00	1,470.00
Cyfluthrin	Insect Suppression	Acres	4.00	.13
Cypermethrin	Insect Suppression	Acres	4.00	.19
DDVP	Research	Acres	10.00	.11
Diazinon	Housekeeping/Facilities Mtc	Acres	20.00	2.10
	Nursery Disease Control	Square Ft	1,000.00	.50
	Nursery Insect Control	Acres	37.00	4.00
	Vector/Plague Suppression	Acres	1,029.00	31.24
Dienochlor	Nursery Insect Control	Ribes Plants	60.00	.03
Dimethoate	Nursery Insect Control	Acres	23.50	11.76
Disparlure	Insect Suppression	Acres	685.00	25.50
Dursban	Seed Orchard Protection	Acres	4.00	1.70
Esfenvalerate	Nursery Insect Control	Acres	103.00	4.90
Fenbutatin-oxide	Insect Suppression	Square Ft	1,648.00	.20
	Nursery Insect Control	Ribes Plants	67.00	.05
Fenvalerate	Nursery Insect Control	Acres	.34	.03
Hydramethylnon	Insect Suppression	Acres	15.50	28.70
Lindane	Insect Suppression	Acres	.10	1.00
Malathion	Nursery Insect Control	Acres	.20	.28
	Seed Orchard Protection	Acres	20.00	5.00
N-octyl bicycloheptene	Insect Suppression	Acres	.00	.01
Nuclear polyhedrosis virus	Insect Eradication	Acres	1,500.00	3,750.00 x 10 <sup>12</sup> PIB
	Insect Suppression	Square Ft	1,108.00	.13 x 10 <sup>12</sup> PIB
Orthene	Nursery Insect Control	Acres	.57	1.25



Table 26--Pesticide use report-fiscal year 1998--Continued

Common Name	Management Objective	Treatment Unit	Units Treated	Quantity Used Pounds 1/
Permethrin	Seed Orchard Protection	Acres	27.24	1.53
Piperonyl-butoxide	Insect Suppression	Acres	.00	.00
Potassium salts	Insect Suppression	Acres	27.00	1,402.00
Pyrethrins	Insect Suppression	Acres	1.00	.00
-----				-----
		Acres	5,385.98	
		Head of Cattle	3,800.00	
		Ribes Plants	839.00	
		Seedlings	56,500.00	
		Square Ft	15,588.00	
-----				-----
				10,356.00 BIU
				3,750.13 x 10 <sup>12</sup> PIB
				3,286.13 lbs
				-----

Table 26--Pesticide use report-fiscal year 1998--Continued

Common Name	Management Objective	Treatment Unit	Units Treated	Quantity Used Pounds 1/
Predacide, Piscicides and Repellents:				
Putrescent egg solids	Animal Damage Control	Acres	10,074.00	1,372.36
Rotenone	Fish Eradication	Stream Miles	32.00	19.90
Thiram	Animal Damage Control	Acres	2.00	28.00
	Animal Damage Control	Lbs. of Seed	991.00	80.00
Thymol	Animal Damage Control	Acres	2.00	23.00
Zinc phosphide	Animal Damage Control	Acres	920.06	6.40
Total 1998 Predacide, Piscicides and Repellents:				
		Acres	10,998.06	
		Lbs. of Seed	991.00	
		Stream Miles	32.00	
				1,529.65 lbs

Table 26--Pesticide use report-fiscal year 1998--Continued

Common Name	Management Objective	Treatment Unit	Units Treated	Quantity Used Pounds 1/
Rodenticides:				
Bromadiolone	Housekeeping/Facilities Mtc Acres		23.00	.14
Diphacinone	Housekeeping/Facilities Mtc Acres		80.00	.03
	Recreation Improve	Acres	10.00	.50
	Seed Orchard Protection	Acres	78.00	.03
Strychnin	Animal Damage Control	Acres	39,228.06	324.45
	Seed Orchard Protection	Acres	14.00	.01
Total 1998 Rodenticides:		Acres	39,433.06	
				330.16 lbs

Grand total 1998 units treated

Acres 200,357.24  
 Head of Cattle 3,800.00  
 Lbs. of Seed 1,440.00  
 Ribes Plants 839.00  
 Seedlings 56,500.00  
 Square Ft 169,156.00  
 Stream Miles 32.00  
 Trtmnt Stations 500.00  
 Trees 400.00

Grand total 1998 amounts of active ingredients used

10,356.00 BIU  
 500.00 Insects  
 3,750.13 x 10<sup>12</sup> PIB  
 179,240.46 lbs

1/ Pounds of active ingredient, unless other units are indicated: BIU (billion international units), PIB (polyhedral inclusion bodies), Insects.

NOTE: Totals may not be exact due to rounding.





Table 27--Total recreation visits on National Forest System lands by State--fiscal years 1994-98

State, Commonwealth, or Territory 2/	1998 1/	1997 1/	1996	1995	1994
	<i>1,000 visits 3/</i>				
Alabama			1,406.0	1,242.9	1,277.3
Alaska			17,181.0	10,648.2	12,912.9
Arizona			72,044.0	72,196.9	80,471.8
Arkansas			5,909.0	5,448.8	5,260.3
California			195,880.0	181,032.6	178,676.2
Colorado			60,488.1 4/	60,488.1	62,741.5
Florida			8,878.0	9,472.0	9,472.3
Georgia			8,332.0	8,768.4	8,456.1
Idaho			23,201.0	22,252.6	21,526.7
Illinois			1,034.0	985.0	985.0
Indiana			525.0	510.0	230.0
Kansas			184.0	181.3	180.0
Kentucky			5,670.0	5,590.7	5,380.4
Louisiana			1,748.0	1,737.1	1,951.8
Maine			1,000.0	1,000.0	397.3
Michigan			9,997.0	8,943.6	9,317.0
Minnesota			12,833.0	8,896.9	8,743.8
Mississippi			3,827.0	2,632.2	2,517.0
Missouri			7,299.0	6,467.6	6,041.6
Montana			31,836.0	30,820.8	27,106.4
Nebraska			528.0	618.3	766.8
Nevada			21,423.0	24,169.0	22,867.3
New Hampshire			5,500.0	5,500.0	11,347.0
New Mexico			12,644.0	12,685.5	12,438.5
New York			19.0	51.7	17.2
North Carolina			20,935.0	19,905.8	18,043.8
North Dakota			387.0	385.0	375.0
Ohio			900.0	900.0	1,000.0
Oklahoma			1,868.0	1,790.3	1,799.6
Oregon			97,465.0 5/	97,465.7	97,465.7
Pennsylvania			13,837.0	14,795.5	11,630.0
Puerto Rico			630.0	700.0	963.5
South Carolina			2,532.0	2,549.4	2,519.8
South Dakota			6,173.0	6,022.3	6,082.4
Tennessee			9,911.0	9,504.6	8,875.8

Table 27—Total recreation visits on National Forest System lands by State—fiscal years 1994-98—Continued

State, Commonwealth, or Territory 2/	1998 1/	1997 1/	1996	1995	1994
	<i>1,000 visits 3/</i>				
Texas			3,712.0	3,852.8	3,715.9
Utah			44,105.0	43,554.5	46,178.5
Vermont			2,699.0 5/	2,698.0	3,434.7
Virginia			18,755.0	17,862.4	17,861.4
Washington			97,456.0 5/	97,456.0	97,456.0
West Virginia			4,284.0	4,156.3	4,413.2
Wisconsin			9,981.0	10,134.4	9,425.6
Wyoming			14,266.0	13,683.9	12,915.8
Total			859,282.1	829,757.1	835,238.9

1/ FY 1997 and 1998 data unavailable.

2/ Unlisted States have no Forest Service recreation programs.

3/ One visit is an entry of one person upon a national forest for the purpose of participating in one or more recreation activity for an unspecified period of time. Only the "primary" activity of the recreation visitor is recorded.

4/ Visits for Colorado are for 1995; data not available for 1996.

5/ Visits for Oregon and Washington are 1994 data; 1995 and 1996 data not available.

**Table 28--Trail miles on the National Forest System by State--fiscal years 1996-98**

State, Commonwealth, or Territory 2/	1998 1/			1997 1/			1996		
	Total	Construct/ Reconst 3/	Maintained	Total	Construct/ Reconst 3/	Maintained	Total	Construct/ Reconst 3/	Maintained
Alabama							294.0	21.0	160.0
Alaska							861.0	34.0	394.0
Arizona							4,537.0	74.0	1,110.0
Arkansas							961.0	12.0	536.0
California							18,158.0	316.0	8,662.0
Colorado							9,551.0	75.0	5,233.0
Florida							442.0	4.0	420.0
Georgia							760.0	4.0	427.0
Idaho							20,269.0	377.0	8,704.0
Illinois							302.0	24.0	64.0
Indiana							225.0	6.0	225.0
Kansas							56.0	0.0	31.0
Kentucky							511.0	12.0	142.0
Louisiana							323.0	30.0	167.0
Maine							134.0	0.0	134.0
Michigan							2,711.0	6.0	1,446.0
Minnesota							2,198.0	18.0	2,198.0
Mississippi							352.0	6.0	145.0
Missouri							747.0	36.0	747.0
Montana							18,024.0	137.0	10,399.0
Nebraska							82.0	2.0	82.0
Nevada							1,665.0	39.0	182.0
New Hampshire							1,543.0	18.0	1,543.0
New Mexico							4,389.0	28.0	926.0
New York							38.0	2.0	38.0
North Carolina							1,713.0	6.0	97.0
North Dakota							53.0	14.0	35.0
Ohio							323.0	12.0	263.0
Oklahoma							195.0	1.0	123.0
Oregon							11,494.0	115.0	7,905.0
Pennsylvania							655.0	1.0	655.0
Puerto Rico							24.0	1.0	7.0
South Carolina							431.0	7.0	166.0
South Dakota							403.0	11.0	292.0
Tennessee							741.0	6.0	79.0
Texas							275.0	50.0	43.0
Utah							6,431.0	74.0	3,351.0
Vermont							1,027.0	21.0	832.0
Virginia							1,867.0	11.0	249.0
Washington							9,117.0	38.0	6,873.0
West Virginia							983.0	0.0	742.0
Wisconsin							1,699.0	12.0	1,133.0
Wyoming							6,523.0	35.0	2,547.0
Total							133,087.0 4/	1,696.0	69,507.0

1/ FY 1997 and 1998 data unavailable.

2/ Unlisted States have no Forest Service recreation programs

3/ Miles constructed include construction of new trails and reconstruction of existing trails. The predominant activity is reconstruction, funds used are appropriated.

4/ In FY 1996, does not include 454 contributed miles.

Table 29--Payment of States from national forest receipts--fiscal years 1996-98 1/

State, Commonwealth, or Territory 2/	FY 1998	FY 1997	FY 1996
	<i>Dollars actual</i>		
Alabama	1,132,837.61	964,419.35	2,049,877.80
Alaska	1,820,091.50	1,186,861.51	5,905,519.94
Arizona	2,112,822.86	2,214,865.38	1,631,749.08
Arkansas	6,583,562.29	5,954,070.48	6,648,382.02
California	30,533,384.80	33,962,946.42	36,157,525.82
Colorado	5,045,264.85	4,387,767.22	5,955,613.62
Florida	1,434,607.96	999,545.83	1,066,315.90
Georgia	328,311.76	698,906.48	907,778.79
Idaho	12,468,422.21	14,267,098.19	17,457,711.74
Illinois	394,100.70	17,395.99	27,727.21
Indiana	138,294.11	25,818.99	7,410.94
Kentucky	254,852.82	433,327.54	494,031.96
Louisiana	2,360,550.67	2,948,815.75	2,735,547.25
Maine	37,218.91	29,962.76	34,773.87
Michigan	2,995,680.41	2,759,083.22	2,384,195.64
Minnesota	3,412,495.17	2,921,889.97	3,179,462.34
Mississippi	5,399,465.46	4,919,049.16	8,276,153.99
Missouri	1,237,033.09	1,149,262.82	1,231,668.46
Montana	10,366,665.72	8,558,089.72	9,383,236.30
Nebraska	33,188.25	31,738.20	30,563.25
Nevada	329,556.48	387,649.20	298,540.38
New Hampshire	548,524.95	440,059.80	510,233.26
New Mexico	854,154.64	923,233.20	652,646.23
New York	2,215.54	6,389.69	6,375.28
North Carolina	594,302.06	653,563.62	692,308.54
North Dakota	57.33	63.44	82.02
Ohio	2,241.43	16,379.83	11,399.70
Oklahoma	1,034,363.08	1,016,643.21	883,416.06
Oregon	85,505,449.53	92,242,534.29	95,238,952.66
Pennsylvania	5,800,446.38	5,998,106.69	6,207,364.12
Puerto Rico	24,408.87	22,527.37	20,837.85
South Carolina	557,227.68	1,292,387.27	960,281.44
South Dakota	3,663,436.84	3,814,006.24	2,349,598.42
Tennessee	326,855.64	440,144.51	319,484.79
Texas	5,620,631.20	2,264,469.21	4,337,308.72
Utah	1,511,626.92	1,598,864.83	1,831,244.84
Vermont	435,564.94	225,878.43	256,960.60
Virginia	767,354.09	789,579.79	822,089.27
Washington	27,073,257.08	28,425,142.05	29,429,025.66
West Virginia	1,944,308.51	1,623,548.54	1,860,935.47
Wisconsin	2,165,773.84	1,861,110.53	1,621,386.26
Wyoming	2,184,110.74	1,849,057.36	1,844,048.53
Total	229,034,718.92	234,322,254.08	255,719,766.02

1/ Data source: All Service Receipts - ASR-09-3.



**Table 30--Summary of selected cooperative forest management and processing program activities--  
selected fiscal years--1945-98**

Fiscal year	Woodland owners assisted <i>Number</i>	Timber sale assistance- volume marked <i>MBF 1/</i>	Loggers and processors assisted <i>Number</i>
1945	8,093	411,330	0
1950	22,828	518,566	0
1955	34,828	549,373	8,182
1960	82,188	569,178	8,099
1965	99,074	716,950	9,248
1970	115,197	1,225,520	13,620
1971	127,828	860,950	14,627
1972	274,001	955,627	5,290
1973	106,422	1,578,664	4,855
1974	117,990	907,311	5,353
1975	140,940	677,532	5,405
1976	105,184	596,599	15,318
1976-77 (T.Q.) <sup>2/</sup>	25,253	220,649	5,849
1977	133,619	921,171	29,101
1978	165,329	1,120,743	12,749
1979	183,585	755,103	11,393
1980	176,385	870,964	11,582
1981	164,279	683,181	18,609
1982	141,472	841,475	15,470
1983	136,265	872,125	8,717
1984	151,539	1,033,440	10,082 <sup>3/</sup>
1985	134,338	913,411	- <sup>4/</sup>
1986	137,753	855,813	-
1987	158,353	1,225,896	-
1988	167,432	890,581	-
1989	153,855	1,242,564	-
1990	148,673	1,597,931	-
1991	153,090	1,697,861	-
1992	190,211	791,462	-
1993	190,256	950,178	-
1994	152,189	1,313,946	-
1995	192,618	1,274,902	-
1996	214,517	1,372,380	-
1997	186,824	1,864,805	-
1998	146,746	2,380,079	-

1/ MBF = thousand board feet.

2/ Transition quarter.

3/ Not all States reported.

4/ - = inadequate data due to lack of State grants in wood utilization program.



Table 31--Summary of selected cooperative forest management and processing activities by region--  
fiscal year 1998 (NIPF lands)

Assistance activity	Unit of measure	Regions					IF Puerto Rico
		R-1 Northern	R-2 Rocky Mountain	R-3 South- western	R-4 Inter- mountain	R-5 Pacific Southwest	
Woodland owners assisted	Number	2,365	7,002	317	570	4,895	427
Forest management plans prepared 1/	Number Acres	91 5,660	409 22,289	45 20,219	127 94,048	5 18,335	5 71
Reforestation:							
Planting	Acres	4,261	16,647	404	61	11,471	39
Seeding	Acres	342	568	30	0	0	0
Timber stand improvement 2/	Acres	4,867	2,099	430	6	6,596	56
Outdoor recreation development	Acres	247	639	6,842	635	33	165
Wildlife habitat development	Acres	2,734	3,803	11,625	3,184	866	26
Timber sale assistance	MBF	31,569	5,199	122	13,660	96	0
volume harvested	MCF	7,699	2,901	438	0	0	0
Urban forestry assistance activities	Urban areas assisted	552	960	283	132	1,017	146
Referrals to consulting foresters	Number	168	288	64	27	166	

See footnotes at end of table.

**Table 31--Summary of selected cooperative forest management and processing activities by region--  
fiscal year 1998 (NIPF lands)--Continued**

Assistance activity	Unit of measure	Regions				Total
		R-6 Pacific Northwest	R-8 Southern	R-10 Alaska	Northwestern Area	
Woodland owners assisted	Number	4,881	50,836	78	75,375	146,746
Forest management plans prepared 1/	Number Acres	187 5,512	21,527 1,303,635	4 631	5,398 336,118	27,798 1,806,518
Reforestation:						
Planting	Acres	24,336	1,018,741	2,397	65,348	1,143,705
Seeding	Acres	0	71,912	0	629	73,481
Timber stand improvement 2/	Acres	18,050	151,186	2,838	79,333	265,461
Outdoor recreation development	Acres	240	136,679	0	31,791	177,271
Wildlife habitat development	Acres	7,949	282,401	63	145,354	458,005
Timber sale assistance volume harvested	MBF MCF	13,044 0	579,439 90,409	4,471 0	1,732,479 27,323	2,380,079 128,770
Urban forestry assistance activities	Urban areas assisted	247	2,452	14	4,233	10,036
Referrals to consulting foresters	Number	666	8,142	8	13,152	22,681

1/ Forest stewardship program plans and acres separately recorded in table 10.

2/ TSI acres were for nonindustrial private landowners only.



**Table 32--Summary of selected cooperative forest management and processing activities by State--  
fiscal year 1998**

State, Commonwealth, or Territory	Woodland owners assisted <i>Number</i>	Reforestation assistance <i>Acres</i>	Timber stand improvement assistance <i>Acres</i>	Timber sale assistance-- harvest volume <i>1,000 cubic feet</i>	State nursery production <i>1,000 trees</i>
Alabama	14,854	162,330	76,647	0	41,500
Alaska	78	2,397	2,838	0	0
American Samoa	167	24	2	0	0
Arizona	193	12	430	438	0
Arkansas	5,030	47,000	350	0	15,000
California	3,402	10,318	2,144	0	2,230
Colorado	4,397	5,606	776	2,852	2,078
Connecticut	522	127	8,573	0	550
Delaware	157	1,123	0	0	0
Florida	167	67,322	1,153	567	24,821
Federated States of Micronesia	193	37	0	0	0
Georgia	484	259,194	7,613	0	47,447
Guam	38	20	0	0	0
Hawaii	488	983	1,450	0	585
Idaho	960	1,203	2,653	2,742	517
Illinois	6,961	8,392	12,661	0	0
Indiana	4,476	1,290	9,743	0	4,500
Iowa	4,191	6,393	3,206	0	2,726
Kansas	916	1,463	251	48	186
Kentucky	2,506	3,602	26,084	0	6,500
Louisiana	5,288	27,820	4,491	893	40,282
Maine	9,675	927	4,732	0	0
Marshall Islands	504	20	3,000	0	800
Maryland	3,285	6,250	5,375	0	2,642
Massachusetts	3,196	14	20,455	0	0
Michigan	1,650	0	0	0	4,500
Minnesota	4,831	8,699	3,566	0	12,000
Mississippi	0	243,188	26,912	0	0
Missouri	0	2,250	0	0	0
Montana	1,127	418	1,535	4,545	726
Nebraska	1,060	4,089	177	0	0
Nevada	337	61	6	0	206
New Hampshire	2,387	0	0	0	0
New Jersey	881	105	0	0	417
New Mexico	123	392	0	0	157
New York	3,503	197	1,646	0	2,837
North Carolina	8,803	77,367	5,509	0	31,252
North Dakota	278	2,640	679	412	1,329
Northern Mariana Islands	4	6	0	0	0
Ohio	4,298	2,571	4,247	0	4,770
Oklahoma	1,118	5,568	2,072	22	7,686
Oregon	2,257	0	0	0	0
Palau	100	63	0	0	0
Pennsylvania	6,147	2,995	0	4,035	0
Republic of the Marshall Islands	0	0	0	0	0
Puerto Rico	425	39	56	0	0

**Table 32--Summary of selected cooperative forest management and processing activities by State--  
fiscal year 1998--Continued**

State, Commonwealth, or Territory	Woodland owners assisted	Reforestation assistance	Timber stand improvement assistance	Timber sale assistance-- harvest volume	State nursery production
	<i>Number</i>	<i>Acres</i>	<i>Acres</i>	<i>1,000 cubic feet</i>	<i>1,000 trees</i>
Rhode Island	146	37	384	621	0
South Carolina	5,030	48,373	0	0	23,278
South Dakota	482	4,464	230	1	0
Tennessee	2,684	9,717	355	762	13,000
Texas	1,220	67,260	0	129	26,000
Utah	233	0	0	0	0
Vermont	2,044	45	4,745	0	0
Virgin Islands	2	0	0	0	0
Virginia	3,652	0	0	88,036	44,408
Washington	2,624	24,336	18,050	0	11,000
West Virginia	6,650	1,980	0	0	0
Wisconsin	10,375	21,953	0	22,667	20,625
Wyoming	147	1,025	665	0	0
Total	146,746	1,143,705	265,461	128,770	396,555

**Table 33--Timber offered, sold, and harvested--fiscal years 1994-98 1/**

	1998	1997	1996	1995	1994
Offered					
Volume (billion board feet)	3.4	4.0	4.0	4.0	3.4
Volume (billion cubic feet) 2/	(0.65)	(0.76)	(0.75)	(0.77)	(0.65)
Sold					
Number of sales 3/	165,697	232,110	190,123	216,272	215,004
Volume (billion board feet)	3.0	3.7	3.4	2.9	3.1
Volume (billion cubic feet) 4/	(0.59)	(0.74)	(0.68)	(0.58)	(0.61)
Value (million dollars) 5/	365.6	494.0	450.5	369.7	508.9
Harvested					
Volume (billion board feet)	3.3	3.3	3.7	3.9	4.8
Volume (billion cubic feet) 4/	(0.66)	(0.66)	(0.74)	(0.77)	(0.96)
Value (million dollars) 5/	445.8	498.0	544.3	616.1	783.0

1/ Offer data comes from the Periodic Timber Sale Accomplishment Report. Sold and Harvest data comes from cut and sold data in the Automated Timber Sale Accounting System (ATSA).

2/ FY 1996 - FY 1998 data come from the Sales Tracking and Accomplishment Reporting System (STARS). FY 1994 - FY 1995 data use conversion factors from the 1990 RPA Program, which vary by region.

3/ Convertible products sales only.

4/ Until cubic information is available from the cut and sold report, conversion from BBF to BCF is calculated at 5 BF per CF, then rounded. Data for FY 1994-96 has been changed here to reflect this.

5/ Convertible products sales only. Includes reforestation, stand improvement, and timber salvage deposits. Does not include value of roads or brush disposal.

Table 34--Timber offered, sold, and harvested by region--fiscal years 1997-98

	1998						1997					
	Offered 1/			Sold 2/3/			Offered 1/			Sold 2/3/		
	MMBF	MMCF	MMBF	MMBF	MMCF	MMCF	MMBF	MMCF	MMBF	MMBF	MMCF	MMCF
Northern (R-1)	290.7	63.0	277.6	362.8	55.5	72.6	417.0	88.4	429.3	85.9	316.7	63.3
Rocky Mountain (R-2)	174.5	35.3	165.2	154.4	33.0	30.9	223.0	45.4	169.3	33.9	123.6	24.7
Southwestern (R-3)	148.5	26.4	102.9	93.8	20.6	18.8	123.9	21.6	88.9	17.8	83.3	16.7
Intermountain (R-4)	196.6	35.8	138.1	169.5	27.6	33.9	191.3	35.7	195.1	39.0	221.2	44.2
Pacific Southwest (R-5)	463.6	91.0	425.3	474.2	85.1	94.8	667.3	126.0	597.9	119.6	505.2	101.0
Pacific Northwest (R-6)	789.7	152.2	652.3	662.4	130.5	132.5	951.2	186.7	870.5	174.1	767.9	153.6
Southern (R-8)	649.7	118.1	667.3	636.7	133.5	127.3	682.4	124.1	606.6	121.3	571.6	114.3
Eastern (R-9)	514.7	82.9	502.3	622.7	100.5	124.5	568.1	91.5	568.3	113.7	587.0	117.4
Alaska (R-10)	187.2	41.0	24.3	121.2	4.9	24.2	177.0	43.5	161.5	32.3	108.8	21.8
Total 5/	3,415.3	645.8	2,995.3	3,297.8	591.1	659.6	4,001.1	762.8	3,687.7	737.5	3,285.3	657.1

MMBF = million board feet; MMCF = million cubic feet.

1/ Sales offered for the fiscal year being displayed. Offer data comes from the Periodic Timber Sale Accomplishment Report.

2/ Includes sales offered in prior fiscal years and sold in the fiscal year being displayed, and miscellaneous small sales that were previously offered and/or sold and were reoffered and sold in the fiscal year being displayed. Does not include the volume of long-term sales released for harvesting.

3/ Sold and offered will not be equal since some sales were not sold (awarded) in the same fiscal year in which they were offered. Some sales did not receive any bids, or were withdrawn. Sold data comes from the cut and sold report. Conversion is 5 BF per CF until cubic data can be generated from cut and sold report.

4/ Includes the volume harvested on long-term sales. Harvest data comes from the cut and sold report. Conversion is 5 BF per CF until cubic data can be generated from cut and sold report.

5/ Totals are actual; Regional figures are rounded and may not add to totals.



Table 35—Timber sold and harvested by State—fiscal year 1998 1/

State or Commonwealth 2/	Timber sold				Timber harvested		
	Sales	Volume		Bid value 3/	Volume		Receipts 3/
		MMBF	MMCF		MMBF	MMCF	
Alabama	582	28.7	5.734	\$3,618,839	32.8	6.569	\$4,310,973
Alaska	153	24.3	4.857	\$1,202,513	121.2	24.239	\$5,028,693
Arizona	10,591	73.4	14.676	\$3,906,340	63.3	12.661	\$2,996,046
Arkansas	1,700	173.0	34.596	\$38,704,469	152.5	30.492	\$26,310,829
California	34,227	421.5	84.307	\$39,370,802	474.3	94.863	\$56,027,662
Colorado	7,542	67.2	13.449	\$4,456,105	58.1	11.622	\$4,852,254
Florida	91	42.7	8.531	\$4,760,903	51.2	10.246	\$4,801,932
Georgia	557	19.6	3.926	\$2,127,256	13.8	2.750	\$1,012,180
Idaho	15,598	207.1	41.410	\$32,011,161	252.2	50.448	\$41,414,726
Illinois	48	0.1	0.011	\$535	0.1	0.018	\$4,588
Indiana	54	0.3	0.067	\$4,793	5.7	1.146	\$542,316
Kentucky	628	1.3	0.260	\$27,071	9.4	1.886	\$770,236
Louisiana	295	58.2	11.635	\$12,334,261	48.5	9.709	\$7,761,088
Maine	2	1.7	0.341	\$123,099	2.1	0.416	\$106,580
Michigan	605	185.2	37.031	\$12,921,563	190.6	38.112	\$11,830,858
Minnesota	177	115.5	23.101	\$6,987,906	117.6	23.517	\$7,683,829
Mississippi	441	122.0	24.399	\$23,680,483	112.7	22.550	\$18,728,292
Missouri	690	44.5	8.905	\$5,388,291	52.3	10.452	\$5,522,101
Montana	11,082	151.0	30.194	\$19,143,960	220.2	44.045	\$35,030,084
Nebraska	9	0.0	0.005	\$1,515	0.0	0.004	\$190
Nevada	1,767	5.6	1.119	\$685,033	2.8	0.552	\$132,465
New Hampshire	248	17.3	3.452	\$1,194,224	24.8	4.962	\$1,494,917
New Mexico	17,686	29.4	5.886	\$815,826	30.4	6.078	\$668,763
New York	8	0.0	0.004	\$689	0.0	0.003	\$649
North Carolina	895	29.6	5.926	\$2,548,794	26.1	5.228	\$1,895,139
North Dakota	45	0.1	0.012	\$610	0.1	0.012	\$610
Ohio	132	0.3	0.054	\$15,496	0.2	0.037	\$2,669
Oklahoma	45	14.1	2.810	\$3,011,702	11.2	2.234	\$1,973,200
Oregon	23,796	508.4	101.673	\$69,786,306	519.1	103.814	\$98,251,169
Pennsylvania	106	9.8	1.961	\$5,517,831	51.1	10.216	\$21,029,286
South Carolina	268	28.0	5.607	\$2,765,011	18.6	3.722	\$2,052,044
South Dakota	1,633	76.6	15.320	\$9,751,255	60.7	12.143	\$13,403,411
Tennessee	236	12.2	2.433	\$1,262,610	12.4	2.474	\$1,089,672
Texas	310	120.8	24.153	\$20,834,795	118.2	23.633	\$19,261,741
Utah	5,787	45.7	9.144	\$4,584,172	46.7	9.342	\$3,247,748
Vermont	89	5.8	1.158	\$1,364,557	5.9	1.174	\$1,239,407
Virginia	2,197	16.8	3.357	\$1,300,661	28.3	5.658	\$2,557,914
Washington	4,943	143.9	28.790	\$17,033,681	145.8	29.157	\$22,417,964
West Virginia	599	10.5	2.105	\$2,008,186	25.7	5.138	\$5,586,295
Wisconsin	1,224	111.9	22.389	\$7,527,040	147.9	29.587	\$9,197,324
Wyoming	18,611	31.4	6.270	\$2,773,718	43.3	8.659	\$5,535,814
Total	165,697	2,955.3	591.058	\$365,554,063	3,297.8	659.567	\$445,773,656

MMBF = million board feet. MMCF = million cubic feet. Conversion is 5 BF per CF until cubic data is available.

Columns may not add due to rounding.

1/ Data source is the cut and sold report. Excludes nonconvertible special forest products.

2/ Unlisted States had no timber sold or harvested in FY 1998.

3/ Includes reforestation and stand improvement costs and timber salvage. Does not include value of roads or brush disposal.

Table 36--Uncut timber volume under contract by region (all products)--fiscal years 1994-98

Region	1998 1/		1997 1/		1996 1/		1995 1/		1994 2/	
	MMBF /3	MMCF /4	MMBF /3	MMCF /4	MMBF /3	MMCF /4	MMBF /3	MMCF /5	MMBF /3	MMBF /5
Northern (R-1)	576	121	650	163	568	142	555	136	706	173
Rocky Mountain (R-2)	423	94	389	74	350	78	461	105	507	116
Southwest (R-3)	96	19	88	18	84	17	116	19	135	23
Intermountain (R-4) /6	360	63	405	71	417	73	512	105	417	85
Pacific Southwest (R-5) /7	710	142	807	161	775	149	793	123	871	135
Pacific Northwest (R-6)	1,338	266	1,353	268	1,289	248	1,148	225	1,594	313
Southern (R-8)	928	169	907	165	871	158	1,159	216	1,140	213
Eastern (R-9)	1,244	202	1,363	220	1,388	225	1,475	239	1,607	260
Alaska (R-10) /8	230	57	264	66	149	37	103	26	63	16
Total	5,906	1,132	6,226	1,206	5,891	1,127	6,322	1,194	7,040	1,334

1/ Data source is the Automated Timber Sale Accounting System (ATSA), rather than regional calculations.

2/ Some numbers have changed from the 1994 Report due to replacement of regional information with more auditable data obtained from the ATSA.

3/ Volume (million board feet) in local scale.

4/ Conversions from million board feet to cubic feet (MMCF) based on actual regional conversion factors, which vary by region.

5/ Million cubic feet (MMCF) conversions based on 1990 RPA Program, which vary by region.

6/ Shows sawlog volume only for FY 1994-1996. All convertible products data not available.

7/ Shows sawlog volume only for FY 1996. 1997 data changed to include all convertible products.

8/ Long-term sale not included.

**Table 37--Forestland Management funding--fiscal years 1996-98 1/**

	1998	1997	1996
	<i>1,000 dollars</i>		
Timber sales management	209,000	196,000	188,641
Forestland vegetation management	65,765	55,768	51,740
Road construction (timber-related)			
Forest Service construction	47,400	59,000	57,000
Purchaser construction 2/	0	(36,854)	(41,291)
Purchaser construction by the Forest Service 3/	4,228	5,945	6,209
Subtotal, Road construction	51,628	64,945	63,209
Total, appropriated accounts	326,393	316,713	303,590
Special accounts 4/			
Timber salvage sales	147,900	174,024	204,649
K-V reforestation & timber stand improvement	121,810	140,564	142,811
Reforestation trust fund	30,000	30,000	30,000
Total, Special accounts	299,710	344,588	377,460
Total	626,103	661,301	681,050

1/ Data source is each fiscal year's final program budget advice or budget authority.

2/ Not included in totals.

3/ FY 1997 data has been corrected.

4/ Include General Administration expenses.

**Table 38--Sold value of special forest products--fiscal year 1998 1/**

Product Category	Sold Value <i>Actual dollars</i>
Christmas Trees	1,324,325
Transplants (Wildlings)	39,829
Limbs and Boughs	172,718
Foliage	2,674
Bark	766
Cones, Green	4,329
Cones, Dry	9,888
Seed	661
Nuts and Seed	2,010
Fruits and Berries	934
Tree Sap	920
Roots	145
Mushrooms	155,275
Fungi	155
Mosses	13,157
Herbs	50
Ferns	50
Wildflowers	2,838
Grass	54,710
Aquatic Plants	10
Other Plants	57,636
Miscellaneous	1,134,546
<b>Total</b>	<b>2,977,626</b>

1/ Data source is final fiscal year cut and sold report . Includes all products not convertible to board foot or cubic units. Values have been rounded and may not equal the actual total shown.



**Table 39--Authorized grazing use in head months by State--fiscal year 1998 1/**

State, Commonwealth, or Territory 2/	Cattle	Domestic Horses	Sheep	Wild Horses	Wild Burros	Total
Alabama	303	33				336
Arizona	723,978	7,872	47,385		288	779,523
Arkansas	4,160	12			12	4,184
California	293,376	2,159	155,700	9,153	480	460,868
Colorado	593,907	2,558	445,914			1,042,379
Florida	600					600
Georgia	3,091					3,091
Idaho	442,272	4,807	532,074			979,153
Illinois	101					101
Indiana	34					34
Kansas	31,905					31,905
Louisiana	15,916					15,916
Michigan	1,752					1,752
Minnesota	41					41
Mississippi	2,705					2,705
Missouri	26,850					26,850
Montana	420,212	7,829	49,335			477,376
Nebraska	105,479	8				105,487
Nevada	155,020	347	166,744	16,377	2,603	341,091
New Mexico	749,223	3,979	79,974			833,176
New York	7,751					7,751
North Dakota	391,513	3,308				394,821
Ohio	709					709
Oklahoma	19,523	111				19,634
Oregon	335,644	583	64,966	1,860		403,053
South Dakota	389,493	85	19,321			408,899
Texas	32,469	54				32,523
Utah	335,358	1,455	513,261			850,074
Vermont	108					108
Virginia	6,656	1,469				8,125
Washington	65,643	50	35,456			101,149
West Virginia	5,688	40	321			6,049
Wyoming	433,442	6,673	369,419			809,534
Total	5,594,922	43,432	2,479,870	27,390	3,383	8,148,997

1/ A head month (HM) is the billing unit for permitted grazing and is equal to 1 month's occupancy.  
Reflects paid permits only for domestic livestock use.

2/ Unlisted States had no Forest Service grazing program in 1998.

Table 40--Annual grazing statistics--fiscal year 1998

	Permittees 1/		Cattle		Horses and burros		Sheep and goats		Total	
	Number	HM's 2/ AUM's 3/	Number	HM's 2/ AUM's 3/	Number	HM's 2/ AUM's 3/	Number	HM's 2/ AUM's 3/	Number	HM's 2/ AUM's 3/
Permitted to graze	1,262,000	6,326,792 8,010,441	10,019	46,863 55,474	966,221	2,883,895 836,661	2,238,240	9,257,550 8,902,576		
Authorized to graze:	8,342	5,594,922	9,520	43,432	902,010	2,479,870	2,102,260	8,118,224		
Paid permits 4/		7,044,765		51,329		719,603		7,815,697		
Free use	51	2,430	518	5,343 6,404	6,750	18,860 4,979	9,698	30,237 19,203		
Private land permits	103	43,447	385	3,656 4,385	5,815	36,295 10,155	49,647	262,041 297,765		
Crossing	2	1,640	95	3 4		1,677 362	1,735	1,840		
Total Authorized 5/	8,395	1,194,800 5,601,116 7,052,791	10,133	48,778 57,737	908,760	2,500,407 724,944	2,113,693	8,150,301 7,834,900		
Wild horses			2,650	27,390 27,390			2,650	27,390 27,390		
Wild burros			278	3,383 3,383			278	3,383 3,383		

1/ Permittees holding paid permits are not counted in other categories.

2/ A head month is the billing unit for permitted grazing and is equal to 1 month's occupancy.

3/ An animal unit month (AUM) is the amount of forage required by a 1,000 lb. cow, or equivalent, for 1 month.

4/ Includes term and temporary grazing permits and all other paid permits (e.g., transportation, research, working animals, special uses, etc.).

5/ Private land and wild horse and burro data not included in totals.

**Table 41--Energy mineral workload and production--fiscal years 1994-98**

Fiscal year	Acres under lease <i>Millions</i>	Oil production 1/ <i>Barrels</i>	Gas production 1/ <i>1,000 cu. ft.</i>	Coal production 1/ <i>Short tons</i>
1994	6.5	12,400,000	325,400,000	114,500,000
1995	6.0	12,000,000	325,000,000	115,000,000
1996	5.9	10,000,000	300,000,000	115,000,000
1997	5.4	10,000,000	250,000,000	115,000,000
1998 2/	5.8	18,500,000	150,000,000	75,000,000

1/ Estimates for all years prior to 1998.

2/ Minerals Management Service (MMS) data.

Table 42--Miles of landline location by region--fiscal year 1998 1/

Region	Total Miles of Boundary Line	Miles Marked 1998	Total Miles Marked thru 1997	Miles Marked Marked thru 1998	Miles Maintained 1998
Northern (R-1)	27,725	221	9,700	9,921	89
Rocky Mountain (R-2)	44,086	167	6,560	6,727	66
Southwestern (R-3)	18,053	73	5,836	5,909	23
Intermountain (R-4)	20,960	84	5,122	5,206	59
Pacific Southwest (R-5)	26,700	71	12,719	12,790	95
Pacific Northwest (R-6)	25,627	91	16,573	16,664	20
Southern (R-8)	41,234	76	35,629	35,705	1,626
Eastern (R-9)	42,071	171	12,990	13,161	85
Alaska (R-10)	2,602	96	1,843	1,939	28
Total	249,058	1,050	106,972	108,022	2,091

1/ Totals include accomplishment from the NFLL appropriation, all contributing benefiting functions, and cooperative and cost-sharing activities.



**Table 43--Road maintenance accomplishments--fiscal year 1998**

Region	Cost <i>1,000 dollars</i>	Miles fully maintained 1/ <i>Miles</i>	Total miles 2/ <i>Miles</i>
Northern (R-1)	8,552	25,444	49,966
Rocky Mountain (R-2)	7,134	6,516	31,167
Southwest (R-3)	7,861	16,040	56,010
Intermountain (R-4)	7,260	11,470	38,403
Pacific Southwest (R-5)	14,768	15,533	44,398
Pacific Northwest (R-6)	18,655	32,504	93,879
Southern (R-8)	8,634	19,995	35,997
Eastern (R-9)	6,090	15,305	30,121
Alaska (R-10)	1,629	1,419	3,577
Total	80,583	144,226	383,518

1/ Includes miles of road maintained at a level consistent with current use.

2/ Road mile changes include roads acquired through land and right-of-way purchases, inventory revisions, addition of unclassified roads, and new construction.

3/ Does not include expenditures by the Washington Office or other units.

**Table 44--Road and bridge construction and reconstruction--fiscal year 1998**

Region	Cost 1/ 1,000 dollars	From Appropriated Roads Funds			
		Construction		Reconstruction	
		Roads Miles	Bridges No.	Roads Miles	Bridges No.
Northern (R-1)	6,692	0.2	0	39.5	1
Rocky Mountain (R-2)	4,956	0.0	0	13.3	0
Southwest (R-3)	7,270	0.2	0	48.3	0
Intermountain (R-4)	6,145	0.3	1	38.6	0
Pacific Southwest (R-5)	10,926	0.7	0	62.3	0
Pacific Northwest (R-6)	20,289	8.0	0	40.7	0
Southern (R-8)	9,843	0.9	0	20.7	1
Eastern (R-9)	8,298	0.2	0	64.7	3
Alaska (R-10)	9,098	0.7	0	8.6	0
Total	83,517	11.2	1	336.7	5

See footnotes at end of table.

**Table 44--Road and bridge construction and reconstruction--fiscal year 1998--Continued**

Region	Cost 1/ 1,000 dollars	By Timber Purchasers 2/			
		Construction		Reconstruction	
		Roads Miles	Bridges No.	Roads Miles	Bridges No.
Northern (R-1)	5,224	29.1	0	445.7	0
Rocky Mountain (R-2)	2,411	28.8	0	147.5	1
Southwest (R-3)	379	1.2	0	12.0	0
Intermountain (R-4)	1,775	21.5	0	108.1	0
Pacific Southwest (R-5)	5,754	16.1	1	250.7	0
Pacific Northwest (R-6)	8,264	45.9	0	624.5	1
Southern (R-8)	11,631	29.1	0	593.5	1
Eastern (R-9)	3,229	22.9	1	96.3	0
Alaska (R-10)	307	5.7	2	44.0	1
Total	38,974	200.3	4	2,322.3	4

1/ Includes field expenditures for engineering and program support for appropriated and timber purchaser roads. Does not include expenditures by the Washington Office and other units.

2/ Does not include 3.1 miles of construction, and 73.1 miles of reconstruction turned back to the Forest Service (Purchaser Election Program).

**Table 45--Purchaser election roads constructed by the Forest Service--fiscal year 1998**

Region	Cost <i>1,000 dollars</i>	Construction		Reconstruction	
		Roads	Bridges	Roads	Bridges
		Miles	No.	Miles	No.
Northern (R-1)	45	0.6	0	11.1	0
Rocky Mountain (R-2)	0	0.0	0	0.0	0
Southwest (R-3)	0	0.0	0	0.0	0
Intermountain (R-4)	272	1.3	0	7.3	0
Pacific Southwest (R-5)	643	0.0	0	26.4	0
Pacific Northwest (R-6)	9	0.6	0	0.0	0
Southern (R-8)	552	0.0	0	24.6	0
Eastern (R-9)	149	0.6	0	3.7	0
Alaska (R-10)	276	0.0	0	0.0	0
Total 1/	1,946	3.1	0	73.1	0

1/ Does not include General Administration expenses.

**Table 46--Summary of Forest Service senior, youth, and volunteer programs--fiscal year 1998**

	Program funding <i>Million dollars</i>	Value of work accomplished <i>Million dollars</i>	Persons served <i>Number</i>	Women		Minority		Work accomplished		Placement <i>Percent</i>	Return per dollar invested <i>Dollars</i>
				<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Person years</i>	<i>Percent</i>		
Youth Conservation Corps 1/	Unfunded	1.6	594	43	16			84		NA	0.88
Job Corps 2/	98.6	17.2	9,373	19	45			3,828		82	NA
Senior Community Service Employment Program 2/	28.4	40.7	5,484	44	22			2,291		24	1.43
Volunteers in the National Forests 3/	Unfunded	38.3	98,271	33	11			2,263		NA	NA
Hosted programs 4/	Unfunded	11.3	11,976	30	24			699		NA	NA
Total	127	109.1	125,698	NA	NA			9,165		NA	NA

1/ Funds were not directly appropriated for Youth Conservation Corps; the Congress earmarked not less than \$1 million to be expended from funds available to the Forest Service. The Forest Service operated a \$1.8 million YCC program.

2/ Statistics for 1997 program year (July 1, 1997, through June 30, 1998).

3/ Statistics include 265 Touch America Project (TAP) enrollees and 105 international volunteers.

4/ Includes Camp TIPS, operated as the only Youth Forest Camp.



**Table 47--Number and percent of all permanent and excepted-conditional employees by race/national origin and gender as of September 26, 1998 1/**

Race/National Origin	Women	Men	Total	Percent
American Indian/Alaskan Native	529	843	1,372	4.8%
Asian/Pacific Islander	216	228	444	1.6%
African American	608	576	1,184	4.2%
Hispanic	584	1,072	1,656	5.8%
Caucasian	9,274	14,571	23,845	83.7%
Total	11,211	17,290	28,501	
Targeted Disabilities	144	213	357	1.3%
Percent by Gender	40.3%	59.7%		

1/ Excepted-conditional include cooperative education students and excepted appointments of people with disabilities.

Table 48--Workforce EEO profile by pay levels, as of September 26, 1998 1/

GS Pay Level	Race/National Origin											
	American Indian/ Alaskan Native		Asian/ Pacific Islander		African American		Hispanic		Caucasian		Total	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
GS-1	0	0	0	0	0	0	1	0	1	0	2	0
GS-2	0	0	0	0	0	1	0	0	1	3	1	4
GS-3	6	3	2	2	4	4	7	2	47	25	66	36
GS-4	41	22	14	8	36	28	53	35	499	141	643	234
GS-5	102	95	24	10	70	56	97	132	1,208	740	1,501	1,033
GS-6	69	105	15	11	73	39	58	100	873	820	1,088	1,075
GS-7	96	135	35	16	104	101	127	157	1,502	1,607	1,864	2,016
GS-8	17	31	5	3	28	9	13	28	298	377	361	448
GS-9	99	175	41	42	88	120	88	200	1,891	3,137	2,207	3,674
GS-10	1	10	1	1	0	3	1	8	18	153	21	175
GS-11	62	108	37	47	73	63	73	154	1,532	2,995	1,777	3,367
GS-12	15	52	24	36	64	45	35	93	737	1,747	875	1,973
GS-13	13	33	14	30	45	48	22	67	432	1,294	526	1,472
GS-14	1	12	4	9	14	9	4	26	124	461	147	517
GS-15	0	4	0	2	3	8	2	11	44	231	49	256
GS-18 & SES	0	1	0	1	4	4	1	0	10	29	15	35
WG, WL & WS	7	57	0	10	2	38	2	59	57	808	68	972
Other 2/	0	0	0	0	0	0	0	0	0	3	0	3
Total	529	843	216	228	608	576	584	1,072	9,274	14,571	11,211	17,290

1/ Grand total is 28,501 (includes permanent full-time and permanent part-time employees only, including WG, WL, WS).

2/ Non-GS/GM/SES/WG/WL/WS as GS-16 equivalents.

**Table 49--Number of paid employees by occupational category for selected fiscal years 1/**

Occupation	1998 2/	1997	1996	1995	1994
Professional	11,330	11,038	11,327	11,441	11,830
Administrative	4,610	4,512	4,519	4,627	4,330
Technical	19,145	19,134	20,172	21,970	23,094
Clerical	2,881	2,821	3,050	3,234	3,312
Other	515	195	312	353	558
Wage System	2,180	2,073	2,042	2,060	2,446
Total	40,661	39,773	41,422	43,685	45,570
Full-time equivalents (FTE's) 3/	34,798	36,311	37,205	38,330	40,612

1/ The above data include permanent, summer, seasonal, cooperative education students, stay-in-school, and many other types of employees. These data do not include employees excluded from agency ceilings, such as volunteers (who are not paid salary), the Senior Community Service Employment Program (who are paid by the Department of Labor), and employees in special employment categories.

2/ Includes special employment categories

3/ One Full-Time Equivalent (FTE) equals 2,080 paid hours of employment. These data include emergency FTE's.

**Table 50--Number of paid employees by type of appointment for selected fiscal years**

Type of Appointment	1998 1/	1997	1996	1995	1994
Permanent 2/	28,170	29,558	30,347	30,676	30,978
Nonpermanent 3/	12,491	10,215	11,075	13,009	14,592
Total	40,661	39,773	41,422	43,685	45,570

1/ Includes special employment categories •

2/ Permanent are those employees who have career or career-conditional appointments.

3/ Nonpermanent employees who count in agency ceilings, such as summer, temporary, excepted, term, seasonal and similar types of employees. These data do not include volunteers (who are not paid salary), and the Senior Community Service Employment Program (who are paid by the Department of Labor), and employees in special employment categories.





Table 51--Summary statement of receipts and obligations--fiscal years 1997-98 1/

	1998		1997		Percent change 1997 to 1998
	Receipts	Obligations	Receipts 1,000 constant 1998 dollars	Obligations	
National forest programs					
Cash receipts:					
Sale of timber and use of other forest resources	270,784		202,321		25
Use of national grasslands & land utilization areas	23,015		25,004		(9)
Timber sale area betterment (K-V) 2/	129,094		143,978		(12)
Cooperative work for others	38,561		40,609		(5)
Brush disposal	22,526		19,885		12
Miscellaneous (sales, rentals, damages, etc.) 3/	5,054		9,853		(95)
Restoration of forest lands and improvements	758		594		22
Golden Eagle passports	183		624		(241)
Timber salvage sales	123,342		181,829		(47)
Operation and maintenance of quarters	4,876		7,084		(45)
Gifts, donations, and bequests	713		812		(14)
Subtotal	618,906		632,591		(2)
Cash receipts from NFS lands collected in conjunction with, and deposited to, accounts of other agencies	130,237		161,679		(24)
Noncash income (roads built by timber purchasers)	38,974		37,812		3
Total cash receipts	788,117		832,082		(6)
Obligations					
Operating costs		2,254,686		2,788,547	(24)
Capital outlay		14,133		3,545	75
Total obligations		2,268,819		2,792,092	(23)
Other Forest Service programs					
Forest Research programs:					
Forest research		170,645		194,540	(14)
Research construction		(5)		8	264
Cooperative research work		0		(4)	0
Gifts, donations, and bequests for forest rangeland research	4	422		739	(75)
Tongass Timber Supply Fund		0		0	0
Subtotal	4	171,062		195,283	(14)

See footnotes at end of table.

Table 51--Summary statement of receipts and obligations--fiscal years 1997-98 1/--Continued

	1998		1997		Percent change	
	Receipts	Obligations	Receipts	Obligations	1997 to 1998	Obligations
	1,000 constant 1998 dollars					
State and Private Forestry programs						
State and Private Forestry cooperation		155,170		155,597		(0)
Rural community fire protection		1,875		1,308		30
Flood prevention and watershed protection		2,574		2,104		18
Licensee programs (Woodsy Owl and Smokey Bear)	83	99	163	64	(96)	35
Forestry Incentives and other programs 4/		1,041		1,485		
Subtotal	83	160,759	163	160,558	(96)	0
International Forestry Programs						
International Forestry		0	0	0		
Subtotal	0	0	0	0		
Human Resource programs						
Job Corps		91,668		96,346		(5)
Senior Community Service Employment		25,498		27,546		(8)
Subtotal	0	117,166	0	123,892		(6)
Grand total, all programs	0	2,717,806	832,245	3,271,824	0	(20)
Cash receipts distributed to States, counties and Puerto Rico						
Payments to States and Puerto Rico		227,768		239,115		(5)
Payments to Minnesota		1,267		1,300		(3)
Payments to counties (National Grasslands and Land Utilization Areas)		6,045		4,766		21
Total	0	235,080	0	245,181		(4)
Internal equipment and supply service (Working Capital)	137,615	130,139	141,193	173,971	(3)	(34)
Reimbursements for work performed for government and others included above	0	172,522	0	189,848		(10)

1/ Obligations were incurred on a "charged-as-worked" basis.

2/ K-V = Knutson-Vandenberg.

3/ Includes sale of personal property and acquisitions of lands to complete land exchanges.

4/ Includes Resource Conservation and Development, and Pesticide Impact assessment funds transferred from Agricultural Research Service.

Table 52--Statement of receipts--fiscal years 1994-98

	1998	1997	1996	1995	1994
	<i>1,000 dollars actual</i>				
Receipts from sale and use of forest resources					
Timber and forest products	207,938	197,194	195,000	303,046	431,615
Grazing	6,992	6,972	7,352	8,756	11,056
Land uses	9,353	8,149	4,664	6,246	5,960
Recreation	42,959	45,275	47,618	46,427	47,762
Power	2,433	1,756	1,894	1,607	1,657
Minerals	24,124	25,408	17,007	20,663	16,817
Subtotal	293,799	284,754	273,535	386,745	514,867
Receipts from deposits for expenditures on national forests					
Timber sale area betterment	129,094	140,329	157,897	177,951	225,381
Timber salvage sales	123,342	177,221	181,243	135,640	163,281
Brush disposal	22,526	19,381	17,821	16,135	22,498
Restoration of Forest Service lands and improvements	758	579	4,920	972	358
Cooperative work	38,561	39,580	42,803	37,246	43,023
Operation and maintenance of quarters	4,876	6,904	6,468	6,504	6,452
Gifts, donations, and bequests	713	791	1,303	496	965
Subtotal	319,870	384,785	412,455	374,944	461,958
Other receipts					
Miscellaneous (sales, rents, etc.)	4,803	8,664	6,390	6,644	6,552
Golden Eagle passports	183	608	230	200	133
Sale of personal property	0	0	0	0	0
Royalties from sale of Smokey Bear and Woodsy Owl products	83	159	46	122	82
Acquisition of lands to complete exchanges	251	939	413	1,398	212
Gifts, donations, and bequests for forest rangeland research	4	55	5	5	18
Subtotal	5,324	10,425	7,084	8,369	6,997

See footnotes at end of table.

Table 52--Statement of receipts--fiscal years 1994-98--Continued

	1998	1997	1996	1995	1994
	<i>1,000 dollars actual</i>				
Other income					
Estimated collections by Department of Energy for power licenses on proclaimed national forest land	2,244	2,174	1,931	1,778	2,159
Estimated collections by Department of the Interior for mineral leases on proclaimed national forest land	127,993	155,408	169,240	253,600	213,812
Value of roads built by timber purchasers applied in lieu of cash payment for timber	38,974	36,854	41,291	47,896	68,275
Subtotal	169,211	194,436	212,462	303,274	284,246
Total	788,204	874,400	905,536	1,073,332	1,268,068
Other net deposits					
Monies advanced on active timber sales 1/					
Balance from previous year	122,039	151,141	193,563	190,554	217,585
Deposited current year	359,102	560,235	568,106	644,347	873,321
Transferred to other accounts	(360,059)	(548,438)	(610,528)	(641,338)	(900,352)
Balance on deposit	121,082	162,938	151,141	193,563	190,554
Amounts deposited pending disposition 2/					
Balance from previous year	8,038	19,292	29,868	18,680	25,079
Deposited current year	56,734	(6,810)	(8,065)	13,195	(5,411)
Transferred to other accounts	(6,300)	(1,343)	(2,511)	(2,008)	(988)
Balance on deposit	58,472	11,139	19,292	29,867	18,680
Subtotal	179,554	174,077	170,433	223,430	209,234
Total	967,758	1,048,477	1,075,969	1,296,762	1,477,302

1/ Timber sale deposits made by timber purchasers.

2/ Budget clearing account.



Table 53--Statement of receipts--fiscal year 1998

	National Forests	Oregon and California grant lands	National grasslands & LU Areas 1/	Other	Total
Receipts from sale and use of forest resources			<i>1,000 dollars actual</i>		
Timber and forest products	204,780	3,155	3		207,938
Grazing	6,314	2	676		6,992
Land uses	9,070	6	277		9,353
Recreation	42,827	106	26		42,959
Power	2,423	0	10		2,433
Minerals	2,101	0	22,023		24,124
Subtotal	267,515	3,269	23,015	0	293,799
Receipts from deposits for expenditures on national forests					
Timber sale area betterment	129,094				129,094
Timber salvage sales	123,342				123,342
Brush disposal	22,526				22,526
Restoration of Forest Service lands and improvements	758				758
Cooperative work	38,561				38,561
Operation and maintenance of quarters	4,876				4,876
Gifts, donations, and bequests	713				713
Subtotal	319,870	0	0	0	319,870
Other receipts					
Miscellaneous (sales, rents, etc.)				4,803	4,803
Golden Eagle passports				183	183
Sale of personal property				0	0
Royalties from sale of Smokey Bear and Woodsy Owl products				83	83
Acquisition of lands to complete exchanges				251	251
Gifts, donations, and bequests for forest rangeland research				4	4
Subtotal	0	0	0	5,324	5,324

See footnotes at end of table.

Table 53--Statement of receipts--fiscal year 1998--Continued

	National Forests	Oregon and California grant lands	National grasslands & LU Areas 1/	Other	Total
Other income			<i>1,000 dollars actual</i>		
Estimated collections by Department of Energy for power licenses on proclaimed national forest land	2,244				2,244
Estimated collections by Department of the Interior for mineral leases on proclaimed national forest land	127,993				127,993
Value of roads built by timber purchasers applied in lieu of cash	38,974				38,974
Subtotal	169,211	0	0	0	169,211
Total	756,596	3,269	23,015	5,324	788,204
Other net deposits					0
Monies advanced on active timber sales 1/					
Balance from previous year	122,039				122,039
Deposited current year	359,102				359,102
Transferred too other accounts	(360,059)				(360,059)
Balance on deposit	121,082	0	0	0	121,082
Amounts deposited pending disposition 2/					
Balance from previous year	8,038				8,038
Deposited current year	56,734				56,734
Transferred to other accounts	(6,300)				(6,300)
Balance on deposit	58,472	0	0	0	58,472
Total	179,554	0	0	0	179,554
Grand total	936,150	3,269	23,015	5,324	967,758

1/ Land utilization projects.

2/ Budget clearing accounts.

**Table 54--Statement of obligations--fiscal years 1994-98**

	1998	1997	1996	1995	1994
	<i>Million dollars actual</i>				
National Forest System	2,268.8	2,721.3	3,195.6	2,871.8	3,436.1
Forest Research	171.1	190.3	189.7	209.9	218.6
State and Private Forestry	160.8	156.5	162.8	157.8	179.0
International Forestry	0.0	0.0	0.6	5.5	7.6
Human Resource programs	117.2	120.8	106.3	113.3	102.3
Working Capital Fund	130.1	169.6	133.7	167.6	140.4
Total	2,848.0	3,358.5	3,788.7	3,525.9	4,084.0

Table 55—Statement of obligations--fiscal year 1998 1/

	Total 2/ 1,000 dollars	Work for other public agencies (reimbursables)
National Forest System		
Protection and management	842,183	49,967
Wildland fire management	569,142	73,606
Cooperative work for others	36,268	0
Cooperative law enforcement	62,431	0
Flood prevention and watershed protection	352	0
Restoration of forest lands and improvements	1,226	0
Reforestation and timber stand improvement	17,814	0
Timber sale betterment (K-V) 3/	94,041	0
Brush disposal	9,961	0
Timber salvage sales	97,255	0
Range betterment	2,720	0
Acquisition of lands, Forest Service	2,048	0
Acquisition of lands, Land and Water Conservation Fund	94,062	3,362
Construction of forest roads and trails	131,988	0
Timber purchaser roads constructed by the Forest Service	1,511	0
Restoration of roads, Federal Highway funds	23,839	0
Road construction, Mount St. Helens, highway trust	0	0
Trail maintenance	12,627	0
Tongass Timber Supply Fund	0	0
General Administration	219,843	0
Operation and maintenance of quarters	4,193	0
Hazardous waste management	7,488	0
Resource management timber receipts	(18)	0
Strawberry Valley land transfer	0	0
Emergency Pest Suppression	271	0
L&WCF Recreation fees	494	0
Southeast Alaska Economic Disaster	0	0
Recreation fee demo	10,370	0
10 Percent Road and Trail Fund	26,710	0
Subtotal 2/	2,268,819	126,935
Research		
Tongass Timber Supply Fund	0	0
Forest research	170,645	12,303
Construction of research facilities	(5)	(6)
Cooperative research	0	0
Gifts, donations, and bequests for forest and rangeland resea	422	0
Subtotal 2/	171,062	12,297

See footnotes at end of table.



**Table 55--Statement of obligations--fiscal year 1998 1/**

	Total 2/ 1,000 dollars	Work for other public agencies (reimbursables)
State and Private Forestry		
Cooperation and general forestry assistance	155,170	7,697
Resource conservation and development	265	0
Rural community fire protection grants	1,875	0
Flood prevention and watershed planning	2,574	0
Licensee programs - Smokey Bear and Woodsy Owl	99	0
Pesticide Impact Assessment	198	0
Forestry Incentives	578	0
Subtotal 2/	160,759	7,697
International Forestry Programs		
International Forestry		
Subtotal 2/	0	0
Human Resource Programs		
Job Corps	91,668	95
Senior Community Service Employment Program	25,498	25,498
Subtotal 2/	117,166	25,593
Total 2/	0	0
Internal equipment and supplies service		
Working Capital Fund (subtotal)	130,139	0
Grand total 2/	0	0

1/ Obligations were incurred on a "charged-as-worked" basis.

2/ May not add due to rounding.

3/ K-V = Knutson-Vandenberg Act.

**Table 56--Summary statement of values and obligations--fiscal year 1998**

Item	Units	1/	Quantity	Average value per unit	Total value
			<i>Number</i>		<i>Million dollars</i>
Value					
Minerals					
Industrial minerals	M Pounds		20,048,273	4.39	88.0
Base metals	M Pounds		361,720	823.01	297.7
Precious metals	M Troy Oz.		10,740	32,849.16	352.8
Oil	BBL		18,500,000	6.52	120.6
Gas	MCF		150,000,000	2.00	299.9
Coal	Tons		75,000,000	4.00	792.6
Others	-	2/			337.6
Timber harvested	MBF		3,297,800	135.18	445.8
Recreation	RVD	3/			
Wilderness and primitive areas	RVD	3/			
Wildlife and fish					
Recreation	AD	3/			
	Pounds	3/			
Range	HM	4/	8,150,301	0.86	7.0
<b>Total value</b>					<b>2,742.0</b>
Expenditures					
National Forest System					2,268.8
Forest Research					171.1
State and Private Forestry					160.8
International Forestry					0.0
Human Resource Programs					117.2
Working Capital Fund					130.1
<b>Total expenditures</b>					<b>2,848.0</b>
<b>Net value, total</b>					<b>(106.0)</b>
<b>Net value, National Forest System only</b>					<b>473.2</b>

1/ BBL=barrels; MCF=thousand cubic feet; MBF=thousand board feet; RVD=recreation visitor day;

AD=activity day; HM=head month.

2/ Units for leasable other minerals are not standard.

3/ Data not available for 1998.

4/ A head month is one month's occupancy by an adult animal. The fee for an adult sheep is 1/5 the fee for cattle.



## PERFORMANCE INDICATOR DEFINITIONS

Accomplishments projected for future years, allocated for current years, and reported for prior years under the following definitions are the result of Forest Service discretionary and mandatory appropriations. With few exceptions, contributed accomplishments (e.g., challenge cost share activities) are not included.

### Objective 1.1

#### **Nonindustrial private forestlands (NIPF) under approved Stewardship Management Plans (acres):**

The Forest Stewardship Program assists nonindustrial private forest landowners on a voluntary, nonregulatory basis to develop long-term Forest Stewardship Plans for the management of their forests and related resources. The indicator is reported as total acreage under Stewardship Plans. Five percent of the total NIPF acres under approved plans that are accomplished in FY 1999 satisfy Objective 1.1. The remaining acres are distributed between Objectives 1.2, 2.1, and 2.5.

#### **Multiresource practices implemented on NIPF lands (acres):**

Forest Stewardship Management Plans can be implemented by landowners through approved, cost-shared multiresource management practices. These practices allow for consideration of all resources such as soil and water, wildlife, recreation, agroforestry, and aesthetics, in balance with the landowners' commodity goals. Five percent of the total NIPF acres under approved plans that are accomplished in FY 1999 is attributed to Objective 1.1. The remaining acres are distributed between Objectives 1.2, 2.1, and 2.5.

#### **Streams and lakes restored or enhanced for fish habitat (miles/acres):**

This measures miles of rivers and streams and acres of lakes (fish bearing) that were restored or enhanced using structural or nonstructural improvements accomplished with appropriated funds. Examples of stream or river improvements include the placement of large woody debris and the placement of boulders to provide spawning habitat. Examples of lake improvements might include construction of an aerator or liming to counteract high pH levels. (MAR 68.3, 70.3, 68.4, and 70.4)

#### **Soil and water resource improvements (acres):**

This includes acres treated with improvement measures to increase the quality and quantity of water, and maintain or improve soil productivity. The reestablishment of vegetation on streambanks and the placement of gabions to halt streambank erosion are two examples of soil and water improvement activities. (MAR 13.0)

#### **Abandoned mine land watershed initiative activities (non-CERCLA sites):**

This measure involves the inventory and reclamation of mines causing damage to the environment or posing risks to public health and safety. The program includes sites that clearly do not involve the Comprehensive, Emergency Response, Compensation, and Liability Act (CERCLA).

#### **Bonded nonenergy/energy operations administered to standard (sites):**

Includes the number of total bonded operations administered to a level that ensures compliance with operating plans. Also includes the number of energy operations, including those conducted under reserved and outstanding rights, administered to a level that ensures compliance with operating plans. Count once each year until final reclamation has been accepted. (MAR 84.4, 87.2)

#### **Road decommissioning (miles):**

This measures the miles of both system and unclassified roads that are restored to natural resource management, and the removal of system roads from the road inventory. (MAR 91.3)

#### **Land adjustments to improve national forest management and protect natural resource values (acres):**

This measures the total acreage acquired through purchase, transfer, and exchange to consolidate national forest land ownership. Accomplishment is recorded when title has been transferred to the Forest Service. An estimated 30 percent of the total is attributed to Objective 1.1. The remaining acres are distributed between Objectives 1.2 and 1.3. (MAR 31.0, 32.1, and 32.2)



## Objective 1.2

### **Forest Health surveys and evaluations, Federal and Cooperative lands (million acres):**

Forest Health surveys and evaluations are a component of the State and Private Forestry Forest Health Management program. It provides professional forest health assistance, including forest insect and disease detection surveys and evaluations for all Federal forest lands, including National Forest System, National Park Service, Bureau of Land Management, Fish and Wildlife Service, Corps of Engineers, Smithsonian Institution, and Department of Defense lands. Through cooperation with State governments, assistance is provided to private landowners in the area of forest health, especially with insect and disease surveys and evaluations. Assistance is also provided to tribal governments.

### **NIPF Stewardship Management Plans (number):**

Stewardship Management Plans are voluntary, long-term management plans for NIPF forests and related resources. The planning process considers all resources including soil and water, wildlife, recreation, agroforestry, and aesthetics in balance with the landowner's commodity goals. Plans are prepared by State forestry personnel, other State and federal agencies, or private forestry consultants.

### **Nonindustrial private forestlands (NIPF) under approved Stewardship Management Plans (acres):**

The Forest Stewardship Program assists NIPF landowners on a voluntary, nonregulatory basis to develop long-term Forest Stewardship Plans for the management of their forests and related resources. The indicator is reported as total acreage under Plans. Sixty percent of the total NIPF acres under approved plans that are accomplished in FY 1999 is attributed to Objective 1.2. The remaining acres are distributed between Objectives 1.1, 2.1, and 2.5.

### **Multiresource practices implemented on NIPF lands (acres):**

Forest Stewardship Management Plans can be implemented by landowners through approved, cost-shared multiresource management practices. These practices allow for consideration of all resources such as soil and water, wildlife, recreation, agroforestry, and aesthetics, in balance with the landowners' commodity goals. Fifty percent of the total NIPF acres under approved plans that are accomplished in FY 1999 is attributed to Objective 1.2. The remaining acres are distributed between Objectives 1.1, 2.1, and 2.6.

### **Forest Legacy Program: Statewide Assessment of Needs (acres, States and projects):**

The Forest Legacy Program conserves environmentally important forests threatened by conversion to nonforest uses through the acquisition of land or interests in land from willing landowners. Statewide assessments, or plans, identify Forest Legacy Areas. Within those areas, interested landowners can apply for the program to the State lead agency, which maintains a list of potential projects and their acreages.

### **Terrestrial wildlife habitat restored or enhanced (acres):**

Restoration and enhancement is accomplished using appropriated funds through application of a variety of management practices such as prescribed burns, seeding to improve foraging habitat for game birds, or manipulating vegetation to obtain the desired habitat condition. Seventy-five percent of the total terrestrial wildlife acres that are restored or enhanced in FY 1999 is attributed to Objective 1.2. The remaining acres are attributed to Objective 1.3. (MAR 66.2)

### **Forestlands maintained or enhanced by stand improvement (acres):**

Stand improvement techniques include release, weeding, thinning, fertilization, and pruning using appropriated funds (NFFV), reforestation trust fund (RTRT), contributed funds, K-V funds (CWKV), or carryover funds. (MAR 20.0)

### **Lands restored by reforestation (acres):**

Includes acres reforested by planting, seeding, and natural means, including site preparation for natural regeneration, and certification of natural regeneration without site preparation. (MAR 19.0)

**Hazardous fuels reduction (acres):**

Accomplishments can include acres directly affected by management-ignited prescribed fire, prescribed natural fire, and mechanical or chemical treatments that reduce fire hazard. (MAR 16.2)

**Treatment of harvest-related woody fuels--brush disposal (acres):**

This involves the treatment of fuels generated from timber sales and timber stand improvement. Techniques can include lopping and scattering and hand or mechanical piling and burning. (MAR 16.3)

**Land adjustments to improve national forest management and protect natural resource values (acres):**

This measures the total acreage acquired through purchase, transfer, and exchange to consolidate national forest land ownership. Accomplishment is recorded when title has been transferred to the Forest Service. An estimated 40 percent of the total is attributed to Objective 1.2. The remaining acres are distributed between Objectives 1.1 and 1.3. (MAR 31.0, 32.1, and 32.2)

**Value of FEPP equipment loaned to States (dollars):**

The State and Private Forestry Volunteer Fire Assistance program provides technical and financial assistance directly to local organizations for fire protection on over 1 billion acres of State and private lands.

Objective 1.3**Noxious weeds treated (acres):**

Includes initial treatment and retreatment of noxious weed infestations. Accomplishment is reported when treatment has been completed. (MAR 9.0)

**Nonstructural range improvements completed (acres):**

This includes revegetation and forage improvement activities related to basic stewardship of rangeland conditions. Examples include seeding, fertilizing, and burning to improve forage production and overall range health. (MAR 29.0)

**Rangelands monitored for progress toward desired condition in AMP's (acres):**

During the fiscal year, an agency employee technically qualified in rangeland monitoring and evaluation physically inspects and evaluates as many acres as necessary, or verifies inspections and evaluations performed by others, to determine ecological status and trend for the acres reported. In accordance with monitoring plans for the area, the employee shall document whether the reported acres meet, do not meet, or are moving towards resource objectives for rangeland ecosystems contained in Allotment Management Plans. (MAR 76.1)

**Terrestrial wildlife habitat restored or enhanced (acres):**

The total number of acres restored or enhanced to achieve desired future condition of habitat using appropriated funds. Restoration and improvement techniques include prescribed burns, seeding to improve foraging habitat for game birds, and manipulating vegetation to obtain desired habitat condition. Twenty-five percent of the total terrestrial wildlife acres that are restored or enhanced in FY 1999 is attributed to Objective 1.3. The remaining acres are attributed to Objective 1.2. (MAR 66.2)

**Land adjustments to improve national forest management and protect natural resource values (acres):**

This measures the total acreage acquired through purchase, transfer, and exchange to consolidate national forest land ownership. Accomplishment is recorded when title has been transferred to the Forest Service. An estimated 30 percent of the total is attributed to Objective 1.3. The remaining acres are distributed between Objectives 1.1 and 1.2. (MAR 31.0, 32.1, and 32.2)



### Objective 1.4

#### **Hazardous substance sites--response actions completed and ongoing (number of actions):**

Includes removal actions, remedial actions, and natural resource damage actions. Removal actions include response actions that either clean up or remove hazardous substances from the environment or are taken in the event of a release or threat of a release. Actions include monitoring, assessing, and evaluating the release or threat of release; disposing of removal material; or other actions to prevent, minimize, or mitigate damage to the public health, welfare, or the environment that might otherwise occur due to the release. Remedial actions include response actions consistent with a permanent remedy taken, instead of, or in addition to, removal actions to prevent and minimize the release of hazardous substances. Natural resource damage actions include actions to restore, replace, or acquire the equivalent natural resources, including the assessment costs.

#### **Watershed or major abandoned mine land site cleanup actions initiated under CERCLA (number of actions):**

Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) the Forest Service is responsible for oversight of all nonemergency investigations and cleanups of hazardous sites on NFS lands. Hazardous sites under CERCLA include abandoned landfills and mines, oil and gas exploration sites, and drug lab or other illegal dumps. The Forest Service is working with DOI agencies to initiate actions including any efforts to plan, design, implement, and monitor the cleanup of CERCLA sites.

### Objective 1.5

#### **Terrestrial TES habitat restored (acres):**

This measure reports acres of TES terrestrial habitat that were restored or enhanced using nonstructural improvements in the reporting year using TES appropriated funds for the explicit purpose of improving TES habitat. Accomplishment is reported when improvement has been completed. If work has been contracted, but not completed, only report improved acres actually completed. Work plans or maps of project areas including project descriptions should document the improvements completed. (MAR 72.6)

#### **Aquatic TES habitat restored or enhanced (stream miles and lake acres):**

This measure reports miles of perennial streams and surface acres of TES aquatic habitat that were restored or enhanced using structural and nonstructural improvements in the reporting year using TES appropriated funds for the explicit purpose of improving TES habitat. Accomplishment is reported when improvement has been completed. If work has been contracted, but not completed, only report improved miles actually completed. Work plans or maps of project areas including project descriptions should document improvements completed. (MAR 72.4,72.5)

#### **Conservation agreements and strategies (number of sensitive aquatic and terrestrial species):**

Report the number of recovery and conservation tasks that were completed in the fiscal year for sensitive aquatic and terrestrial species. Recovery plans and conservation strategies include assignment of specific tasks to agencies. For those federally listed species having such either FWS approved recovery plans or conservation strategies or sensitive species having a conservation strategy approved by Forest Supervisors or Regional Foresters, report those tasks required of the Forest Service in the given year that were accomplished.

#### **Approved and implemented recovery plans (number of listed aquatic and terrestrial species):**

Report the number of recovery and conservation tasks that were completed in the fiscal year for listed aquatic and terrestrial species. Recovery plans and conservation strategies include assignment of specific tasks to agencies. For those federally listed species having such either FWS approved recovery plans or conservation strategies or sensitive species having a conservation strategy approved by Forest Supervisors or Regional Foresters, report those tasks required of the Forest Service in the given year that were accomplished.

## Objective 1.6

### **Scientific papers (number):**

Includes books, papers in series, journal articles, dissertations and theses, and other similar peer-reviewed accomplishments that are primarily related to ecosystem sustainability.

### **Integrated Resource Inventories:**

Integrated inventories are those designed to meet multiple needs for information and consist of "data collection for analysis of the status or conditions of resources or other vegetative or physical characteristics required for planning..."(FSH 1909.4).

NFIM-related integrated resource inventories are those that contribute to issues or decisions being addressed in the forest planning process, ultimately resulting in forest plan revisions or amendments that are technically and legally defensible. Such inventories are more than just incidentally supportive of forest plan revisions; and are not primarily carried out to support projects. They involve both "integrated inventory," done at the "front end" for reasons of practicality and cost effectiveness, and, "inventory integration," done at the "back end" of the forest planning process. NFIM-related integrated resource inventories meet multiple needs, including multilocation, multiresource, and/or temporal needs for information at various scales.

These may include certain single resource inventories that are designed to support forest plan revisions or amendments, but cannot be combined with other resource inventories due to the nature of the resource being measured. Single resource inventories should be relatable to others through geographical locators and mapping. Activity Code EM 111. The integrated inventories are associated with physical, biological, and human dimensions.

### **Physical Dimensions:**

#### **Aquatic ecological unit inventories (miles/acres):**

An inventory that produces a map and/or descriptions of Aquatic Ecological Units, addressing issues associated with forest plan revisions or amendments. Units are defined in "Hierarchical Framework of Aquatic Ecological Units in North America (Nearctic Zone)," USDA Forest Service North Central Experiment Station, GTR NC-176. Report accomplishments, by scale, as number of riverine miles or lacustrine acres for which maps and/or descriptions have been completed during the fiscal year.

Riverine Valley Segment Scale Inventory (MAR 13.2)

Riverine Stream Reach or Channel Unit Scale Inventory (MAR 13.3)

Lacustrine Lake Type Scale Inventory (MAR 13.4)

Lacustrine Lake Zone or Site Scale Inventory (MAR 13.5)

#### **Terrestrial ecological unit inventories (acres):**

An inventory that produces a map and description of Terrestrial Ecological Units (TEUI) that address issues and decisions associated with Forest Plan revisions or amendments. Factors are combined that determine the biophysical capacity of the land (soil, geology, geomorphology, climate, and potential natural vegetation) as defined in FSH 2090.11, and the National Hierarchical Framework of Ecological Units. This includes the standards for Soil Inventory from FSM 2550.4. TEUI's are done at different scales (hierarchical levels) to respond to different levels of information needs as shown below. The scales are described in the National Hierarchical Framework of Ecological Units (Ecomap, Nov. 1993, in revision). Report accomplishments as number of acres for which maps with descriptions have been completed during the fiscal year.

TEUI at Eco-subregion (Section, Subsection) Scale (MAR 60.7)

TEUI at Landscape Scale (MAR 60.8)

TEUI at Land Unit Scale (MAR 60.9)



**Biological dimensions:****Forest resource inventory (acres):**

Work associated with strategic forest inventory and issues relevant to forest plan revisions or amendments (MAR 60.1). This includes preparation of an inventory plan; organizing and training for the inventory project; photo sampling, field sampling and maintenance of quality control; inventory compilation and preparation of data; and similar activities. It includes installing vegetation ground plots at a single intensity level (5000 meter intervals) across all forest land, including reserved lands. These plots are to be taken under the procedures provided in FSH 2404.13a. If NFS units contract with FIA units for plot taking or data processing, it would include pass-through funds for that purpose. Intensifying the permanent plot grid sampling is desirable to obtain additional information for forest planning purposes. Accomplishment is reported in fiscal year when information has been entered into an automated data base and is available for use in analyses above the project level, planning efforts, assessments, etc.

**Rangeland resource inventory (acres):**

Work associated with gathering information on the existing vegetation and physical conditions of rangelands, that addresses issues and decisions associated with forest plan revisions or amendments (MAR 60.2). Report the number of acres where current vegetation species and condition are inventoried to regional standards that include on-the-ground measurements and identification. Rangeland inventories may be conducted in deserts, grasslands, shrublands, woodlands, forests, and alpine zones. Riparian zone inventory is work associated with riparian condition including wetlands, and can be included. It is reported in acres of landscape, not miles of stream. Accomplishment is reported in fiscal year when information has been entered into an automated data base and is available for use in analyses above the project level, planning efforts, assessments, etc.

**Wildlife habitat inventory (acres):**

Supports ecosystem planning/management that has been designed to meet multilevel, multilocation, multiresource or temporal needs (MAR 60.3). NFIM-related inventory addresses issues and decisions associated with Land and Resource Management Plan revisions or amendments. Accomplishment is reported in fiscal year when information has been entered into an automated data base and is available for use in analyses above the project level, planning efforts, assessments, etc.

**TES species habitat inventory (acres):**

Support ecosystem planning/management that has been designed to meet multilevel, multilocation, multiresource or temporal needs (MAR 60.4). NFIM-related inventory addresses issues and decisions associated with Land and Resource Management Plan revisions or amendments. Accomplishment is reported in fiscal year when information has been entered into an automated data base and is available for use in analyses above the project level, planning efforts, assessments, etc.

**Human dimensions:****Heritage inventory (acres):**

Include acres inventoried for heritage resources (MAR 61.9). NFIM-related inventory addresses issues and decisions associated with forest plan revisions or amendments. Accomplishment is reported in fiscal year when information has been entered into an automated data base and is available for use in analyses above the project level, planning efforts, assessments, etc. Accomplishments are reported in acres for which heritage resources have been inventoried during the fiscal year.

**Air quality related values inventoried/monitored (AQRVs):**

The total number of Air Quality Related Values (AQRV) is a measure of air pollution impact inventoried and monitored in a Class I area, with emphasis on issues associated with forest plan revisions or amendments (MAR 81.2). Measures of air pollution impacts refers to ambient air monitoring of gases, aerosols, and particles; direct or indirect monitoring of visibility; monitoring of the health and vitality of ecosystems including such parameters as water and soil chemistry and presence or absence of biotic species. Air quality related values are those features or properties of a Class I area that have been identified in Forest Service AQRV screening documents and/or forest plans and that could be affected by air pollution. Typically, these include visual air quality and particularly valuable or unique ecosystems with resources affected by air pollution.

For counting purposes, if there are multiple sensors at a single site that are measuring parts of the same AQRV, count each one (e.g., a camera, nephelometer, aerosol sampler modules A and B, would count as 4). Where it takes multiple plots to characterize impacts as in foliar damage from ozone, count that as one AQRV inventoried. Where there are multiple toxic air pollutants tested for lichens, count each chemical element and lichen species, not each lichen plot sampled. You may count inventorying and monitoring in cooperation with States, EPA, other Federal land managers and partners as long as the FS contributes money or labor. Count supporting meteorological sites as one even though there are several parameters monitored. Accomplishments will be reported in the fiscal year when information has been entered into an automated data base and is available for use in analyses above the project level, planning efforts, assessments, etc., where the information lends itself to a geographically specific impact or interpretation. Until the Forest Service Air Quality Information Management System is operational, accomplishment should be counted when raw data and analysis are available to field units.

**Multiscale assessments completed (number):**

NFIM-related assessments are characterizations of ecosystems above the project level (e.g., ecoregional, subregional, river basin, landscape, watershed, etc.) that provide information relevant to forest plan revision issues or amendments. Such assessments efficiently consider information that might otherwise be collected independently for several separate national forests within the same ecoregion. Assessments, which may utilize integrated resource inventories and other information, are not decision documents. They report findings for future management consideration, providing a context for subsequent decisionmaking. Accomplishment is reported, by the following scales, in the fiscal year when the Assessment Team Leader certifies that the assessment report is completed.

Ecoregion (Domain/Division/Province) Scale Assessments (MAR 13.6)

Eco-subregion (Section)/River Basin & Subbasin Scale Assessments (MAR 13.7)

Landscape/Watershed Scale Assessments (MAR 13.8)

Objective 1.7

**Wilderness in approved fire plans (acres):**

This indicator is the total wilderness acres in approved fire plans. An approved fire plan is required for a natural ignition to result in a fire that achieves positive resource objectives with a minimum of human intervention. It is recognized that this indicator is not appropriate for Region 10 (Alaska) where wilderness is virtually unaffected by fire.

Objective 2.1

**Nonindustrial private forestlands (NIPF) under approved Stewardship Management Plans (acres):**

The Forest Stewardship Program assists NIPF landowners on a voluntary, nonregulatory basis to develop long-term Forest Stewardship Plans for the management of their forests and related resources. The indicator is reported as total acreage under Plans. Five percent of the total NIPF acres under approved plans that are accomplished in FY 1999 is attributed to Objective 2.1. The remaining acres are distributed between Objectives 1.1, 1.2, and 2.5.

**Multiresource practices implemented on NIPF lands (acres):**

Forest Stewardship Management Plans can be implemented by landowners through approved, cost-shared multiresource management practices. These practices allow for consideration of all resources such as soil and water, wildlife, recreation, agroforestry, and aesthetics, in balance with the landowners' commodity goals. Five percent of the total NIPF acres under approved plans that are accomplished in FY 1999 is attributed to Objective 2.1. The remaining acres are distributed between Objectives 1.1, 1.2, and 2.6.

**Seasonal capacity available (million PAOT-days):**

The cumulative total persons-at-one-time (PAOT) Days of developed facility capacity made available during the recreation season. This includes the capacity available to standard and the capacity available not to standard. (MAR 26.0)



**Recreation special uses administered (permits):**

The total number of Special Use Permits in existence at the end of the fiscal year. This includes permits administered to standard and those not administered to standard but on the books. (MAR 62.5)

**Trails re/constructed to standard (miles):**

Accomplishment reflects reconstruction/construction work on year-round system trails on NFS lands. Accomplishment is reported either when a contract is awarded or when a project is completed by Forest Service crews. Documentation of accomplishment consists of either copies of the contracts and award letters or copies of work plans including maps of projects completed by our own workforce. Separate documentation (i.e., outside the MAR system) of accomplishment related to completed contracts should be kept in unit files. (MAR 21.0)

**Customers rate overall satisfaction with facilities and access, information about recreation opportunities, and service delivery (on a scale of 1-7):**

Customer survey will measure user satisfaction with the recreation experience.

**Customers rate satisfaction with the recreation special use permit process (on a scale of 1-7):**

Customer survey will measure user satisfaction with the recreation special use permit process.

**Customers rate satisfaction with Forest Service visitor services (on a scale of 1-7):**

Customer survey will measure user satisfaction with Forest Service visitor centers.

**Annual education contacts (number):**

An education contact, for the purposes of this report, is an individual contact at least 5 minutes in length. During the contact, specific information about wilderness is transmitted with a high likelihood of understanding on the part of the recipient.

**Wilderness meeting forest plan standards for physical and social conditions (acres):**

This indicator represents a fundamental task of wilderness management; providing wilderness stewardship that "protects and/or restores" wilderness characteristics to units of the National Wilderness Preservation System. Attainment requirements include:

- Having adequate and appropriate forest plan standards and guidelines for wilderness.
- Monitoring wilderness condition to assess compliance, and
- Determination that standards are met or exceeded.

**Customers rate satisfaction with recreation experience in congressionally designated wildernesses (on a scale of 1-7):**

Customer survey will measure user satisfaction with recreation experience in natural wilderness areas.

Objective 2.2**Heritage Sites Evaluated (number):**

Number of heritage sites evaluated in order to determine their eligibility for listing on the National Register of Historic Places or to assess the relative importance of a property within a management allocation framework such as a forest plan, EIS, or EA. Sites evaluated can include sites identified in earlier years but not evaluated and recommended eligible. Evaluation is work done to determine a property's eligibility to the National Register of Historic Places or to assess the relative importance of a property within a management allocation framework. Evaluation may include archival research or evaluative site testing. (MAR 65.2)

**Heritage Sites Interpreted (number):**

The number of heritage sites newly developed for on-site or off-site public interpretation. Includes interpretive displays, guided tours, trails, interpretive brochures, interpretive signs, etc. Count sites in which there has been an investment of resources to specifically interpret the heritage values of the sites. An individual site cannot be counted in more than one category. (MAR 65.3)

**Heritage Sites Preserved and Protected (number):**

Number of heritage sites protected this fiscal year. Protection refers to any deliberate, planned activity that shields a site or its information potential from, or monitors for, natural or human-caused damage or destruction. This is the indirect protections of properties and includes the expenditure of resources to fence, remove impacting activities and facilities, prevent or control access, and monitor site conditions. Preservation is the expenditure of resources to restore, repair, or rehabilitate heritage properties in order to make them last longer or serve the public better. Sites afforded protection through project planning, redesign, and implementation (site avoidance) are not counted in this category. (MAR 65.4)

Objective 2.3**Participating Communities (number):**

The number of communities that have recognized that trees, forests, and greenspace are assets to their communities and are initiating community-based natural resource programs and projects with the help of technical and/or financial assistance through the U&CF program.

**Assists to communities (number):**

The number of technical assists made to communities participating in U&CF programs through State and local agencies.

**Training provided to communities (hours):**

Training that is provided to 1) professionals about advancing U&CF program technologies, 2) policy makers on the important functions trees contribute to cities and communities, and 3) citizens on how to protect, manage, and care for trees in their communities.

**Volunteer assistance generated (hours):**

Hours worked by people who volunteer their time and assistance to maintain, improve, expand, and protect urban and community forests and related greenspace.

Objective 2.4**Communities working under broad-based local strategic plans (number):**

Rural communities that have developed strategic plans to achieve sustainable development through the Economic Action Programs.

**Communities using locally-based measurement systems (number):**

A process and methodology developed by the Forest Service for rural communities to monitor and evaluate their progress toward building capacity and achieving their strategic goals with assistance from the Economic Action Programs.

**Assistance to tribal and minority communities (number):**

The number of tribal and minority communities that receive technical and financial assistance from State and local entities through the Economic Action Programs.

**Communities and/or Volunteer Fire Departments assisted (number of grants):**

The Volunteer Fire Assistance (formerly Rural Community Fire Protection) program provides technical and financial assistance directly to local organizations to effectively and adequately protect over 1 million acres of State and private lands. The volunteer program supports local fire suppression efforts by providing grants to over 3,000 small communities with populations under 10,000 each year.

**State foresters rate satisfaction with Cooperative Fire Protection program (on a scale of 1-7):**

Customer survey will measure user satisfaction with effectiveness of program delivery.



### Objective 2.5

#### **NIPF lands under approved Stewardship Management Plans (acres):**

The Forest Stewardship Program assists NIPF landowners on a voluntary, nonregulatory basis to develop long-term Forest Stewardship Plans for the management of their forests and related resources. The indicator is reported as total acreage under Plans. Thirty percent of the total NIPF acres under approved plans that are accomplished in FY 1999 is attributed to Objective 2.5. The remaining acres are distributed between Objectives 1.1, 1.2, and 2.1.

#### **Multiresource practices implemented on NIPF lands (acres):**

Forest Stewardship Management Plans can be implemented by landowners through approved, cost-shared multiresource management practices. These practices allow for consideration of all resources such as soil and water, wildlife, recreation, agroforestry, and aesthetics, in balance with the landowners' commodity goals. Forty percent of the total NIPF acres under approved plans that are accomplished in FY 1999 is attributed to Objective 2.6. The remaining acres are distributed between Objectives 1.1, 1.2, and 2.1.

#### **Increased use of underutilized species (million cubic feet):**

Use of low-value, underutilized species in connection with ecosystem restoration and maintenance activities. Many eastern and western hardwoods, small diameter lodgepole and ponderosa pine in the inland West, and western juniper and pinyon pine in the Southwest are prime candidates for increased utilization.

#### **Timber volume offered (million cubic feet):**

The preparation and advertisement for sale (Gate 4 completed) of timber, including fuelwood (Fund Code NFTM), that has not been previously advertised for sale, and timber that is categorized as mortality, i.e., fire and/or insect damaged timber using timber salvage sale funds (Fund Code SSSS). This accomplishment is recorded in the Sales Tracking and Reporting System when the timber sale has been advertised or when a permit to remove timber has been sold. (MAR 77.3)

#### **Timber volume sold (million cubic feet):**

The total timber sale volume sold where a successful bidder/purchaser has been determined and the sale has been awarded (Gate 6 completed). This accomplishment is recorded in the Timber Sale Accounting System when the timber sale contract or permit has been executed prior to closure of the fiscal year. (MAR 77.9)

### Objective 2.6

#### **Range structural improvements (number):**

For those structural improvements measured in miles, use a conversion factor of 0.5 miles = 1 structure. Accomplishment is reported when a structure has been completed. If work has been contracted, but not completed, only report structures actually completed. Work plans or maps of project areas including project descriptions should document the number of structures completed. Inspection reports would also document project completion. (MAR 30.0)

#### **Grazing allotments analyzed and NEPA decisions analyzed (number):**

Report all grazing allotments that during the fiscal year had analysis completed and project level decisions (AMP's) implemented in conformance with provisions of NEPA. Because one decision may be prepared for several grazing allotments, the reportable item is the number of allotments for which analyses were completed and decisions issued. (MAR 75.3)

**Grazing allotments administered to standard (number):**

During the fiscal year an agency employee qualified in grazing permit administration supervises livestock grazing by evaluating and documenting permittee compliance and annual achievement of applicable resource management standards, and by documenting and initiating any needed corrective action. An allotment may be reported as managed to standard when the responsible manager determines and documents that the permittee is in compliance AND applicable resource management standards are being met, OR where the permittee was not in compliance and/or applicable resource management standards are not being met, ALL necessary corrective actions have been documented and initiated.

The responsible resource manager will use as many of the following or similar activities as necessary to meet the standard: counting livestock; inspection rides with permittees; conducting livestock utilization studies; preparing, modifying or updating allotment management plans or annual operating plans; inspecting range improvements; issuing or modifying grazing permits or grazing agreements (MAR 75.1).

Objective 2.7**Bonded and nonbonded nonenergy operations processed (number):**

Bonded nonenergy operations include the number of operations processed for which reclamation bonds were required. Accomplishment is reported when an operation plan is processed to a decision. There should be a decision document signed by a line officer in the files that verifies each operation reported as processed.

Nonbonded nonenergy operations include the number of operations processed that did not require a reclamation bond, such as Plans of Operations under 36 CFR 228.A, for which bond requirements were waived; Notices of Intent; or free use mineral material permits for the public. Accomplishment is reported when an operation plan is processed to a decision. There should be a decision document signed by a line officer in the files that verifies each operation reported as processed. (MAR 84.1, 84.2)

**Energy Operations Processed (number):**

The number of new energy operations, including those conducted under reserved and outstanding rights, that required environmental analysis. Accomplishment is reported when an operation plan is processed to a decision. There should be a decision document signed by a line officer in the files that verifies each operation reported as processed. (MAR 87.1)

Objective 2.8**Technical reports (number):**

Includes books, papers in series, journal articles, proceedings, general technical reports, special reports, patents, videos, computer programs, dissertations and theses, and other similar technology transfer accomplishments that are primarily related to provision or support of multiple benefits.

**States surveyed to meet FIA cycle (number):**

The Forest Inventory and Analysis (FIA) program provides the only continuous inventory that periodically quantifies the status of forest ecosystems, including timber and nontimber information, across all landownerships in the United States. FIA strives to maintain current State inventories on the shortest cycle possible (currently about 11 years). These inventories are established with a common sample frame, spatially referenced, across all forested lands.

**Lands covered by Forest Health Monitoring plot system in lower 48 States (percent):**

The Forest Health Monitoring plot system identifies and tests environmental indicators and provides data to evaluate the health of all of the Nation's forests. Performance is measured by the percentage of monitored forested area nationally.

**Land and Resource Management Plan revisions and new plans completed (number):**

Integrated interdisciplinary planning resulting in a NFMA-anticipated forest plan revision, recognizing that some revisions actually may be completed ahead of schedule. Accomplishment is reported in fiscal year when Record of Decision (ROD), based on the Final Environmental Impact Statement (FEIS), is signed by regional forester (MAR 61.1).

**Land and Resource Management Plan revisions and new plans initiated (number):**

Accomplishment is reported in the fiscal year that the Notice of Intent (NOI) is filed (MAR 11.3).

**Land and Resource Management Plan monitoring and evaluation (reports):**

Forests prepare an annual "Forest Plan Monitoring and Evaluation Report" in accordance with respective forest plan requirements; Regional direction; FSH, FSM, and planning regulation guidance on what to monitor; and, associated WO policy direction (MAR 11.2). The audience is the respective National Forest Leadership Team, with benefits to the Region, WO, and public. The report should be based on monitoring data and information gathered during the previous fiscal year; focus on evaluation of forest plan implementation; and, provide an overview of forest resource conditions and trends, with specific attention to the effects of management on landscapes and ecological functions, which will assist regions in preparing "State of the Region Reports" (see also MAR 61.8). It should contain these 10 items:

1. Forest supervisor(s) certification as per national strategy
2. Monitoring activities
3. Evaluation of monitoring results and conclusions (an interdisciplinary team process)
4. Action plan (include any proposed plan amendments/revisions or additional monitoring needs)
5. Status of previous year's recommendations
6. Update of research needs
7. List of preparers
8. Location of supporting documentation for monitoring activities
9. Public participation/disclosure plan
10. Appendix

Accomplishment is reported in fiscal year when the forest plan monitoring and evaluation report is completed.

**State of the Region Evaluation Report:**

Regions prepare a "State of the Region Evaluation Report" (MAR 61.8) based on the annual "Forest Plan Monitoring and Evaluation Reports" prepared by each national forest (see MAR 11.2) and any other pertinent information. The audience is the WO, the Regional Leadership Team, and the public. This report should focus on the evaluation results, as opposed to monitoring data. It should portray the condition and trends of the biological, physical, and human dimensions of NFS lands within the region and the effects that our management has had on the lands and communities. More specifics on the content of these reports are being developed, and will be issued later. Accomplishment is reported in fiscal year when report is completed, and is based on information from the previous fiscal year's forest-level reports, and other sources.

Objective 2.9

Performance indicators for this section are under discussion and development.

Objective 2.10**New boundary marked to standard (miles):**

Posting and marking of boundaries (Fund Code NFLL and TTSA). Accomplishment is recorded when the miles have been located and marked. The amount reported should be supported by a record system maintained by the forest land surveyor. Work that has been contracted but not completed should not be counted as accomplished. Payment estimates can be used to record miles marked to standard under contracts. (MAR 33.0)



**Rights-of-way (cases):**

Rights-of-way cases include the number of road and trail right-of-way easements acquired, resolved through other lands activities, or by cooperative effort. These activities coincide with Categories I, II, and III on the existing annual Rights-of-Way Acquisition Report (FS-5400-25 4/92). (MAR 34.0)

**Special use permits processed (number):**

Special use applications processed to the decisionmaking stage and where a special use authorization is issued. This will also include applications processed, but where no authorization has been issued. This later situation is usually infrequent, but significant expenditures can be incurred so it is important to report. (MAR 89.2)

**Special use permits administered to standard (number):**

Authorizations administered to standard are in compliance with the terms and conditions of the authorization and Forest Service policy. At a minimum, use must be under current authorization and is in compliance with applicable health and safety laws, regulations, and Forest Service policy, and fees have been determined and collected. (MAR 89.3)

**Hydropower license renewals completed (number):**

Federal Energy Regulatory Commission (FERC) licenses are required for hydroelectric power generation projects and for relicensing existing projects on NFS lands. By law, the agency develops the terms and conditions for constructing, operating and maintaining non-federal hydroelectric power projects on NFS lands to ensure protection of national forest resources. Over the next few years many of these projects will be relicensed requiring environmental analyses and some environmental impact statements.

**FS-USGS Quadrangle maps maintained to standard (number):**

The Forest Service and U.S. Geological Survey produce single-edition 7.5 minute topographic quadrangle maps meeting National Mapping Accuracy standards through an interagency agreement, which eliminates duplication of efforts. The single edition maps portray elevation; vegetation; NFS boundaries; other administrative units; and manmade features including roads, urban areas, and communication lines.

Objective 2.11**System roads maintained to standard (percent of total):**

Forest Service-owned system roads that are available for administrative, recreation, timber, and noncommercial uses require maintenance work to provide for user safety, protect natural resources, and support the Forest Service mission. Maintaining these miles to standard includes surface grading, and replacing damaged surfacing materials to remediate road use. It also includes activities not directly tied to use such as cleaning culverts, clearing roadside brush, maintaining traffic control devices, and painting bridges.

**Bridges inspected as scheduled (percent):**

Across NFS lands many bridges that provide access were constructed over 50 years ago. More than 1,000 are deficient or obsolete and 160 have been closed to vehicular traffic. Inspecting bridges on schedule ensures that engineers can prioritize which structures need to be fixed to ensure user safety, access, and resource protection and when that needs to occur.

**Bridges improved or maintained to improve the Sufficiency Rating (points):**

Improve the safety and economy of Forest Service bridges by performing maintenance and replacing, or rehabilitating bridges. The measurement of condition is the Sufficiency Rating, which is based on condition and required use of the bridge. The rating system was developed by the Federal Highway Administration, and is used by all States as required by the National Bridge Inventory (NBI) standards.

**Dams inspected as scheduled (percent):**



Across NFS lands many dams generate power and provide recreation opportunities. Inspecting dams on schedule ensures that engineers can prioritize needs that will ensure safety and protect natural resources.

**Investments in existing roads (miles):**

Miles of improvements to existing roads in accordance with approved plans and specifications.

Accomplishment is reported when a contract is awarded, when timber sales with purchaser road work are sold, or when noncontract work is accepted. Copies of the contract and award letters, or acceptance reports, document the accomplishment reported. (MAR 93.2)

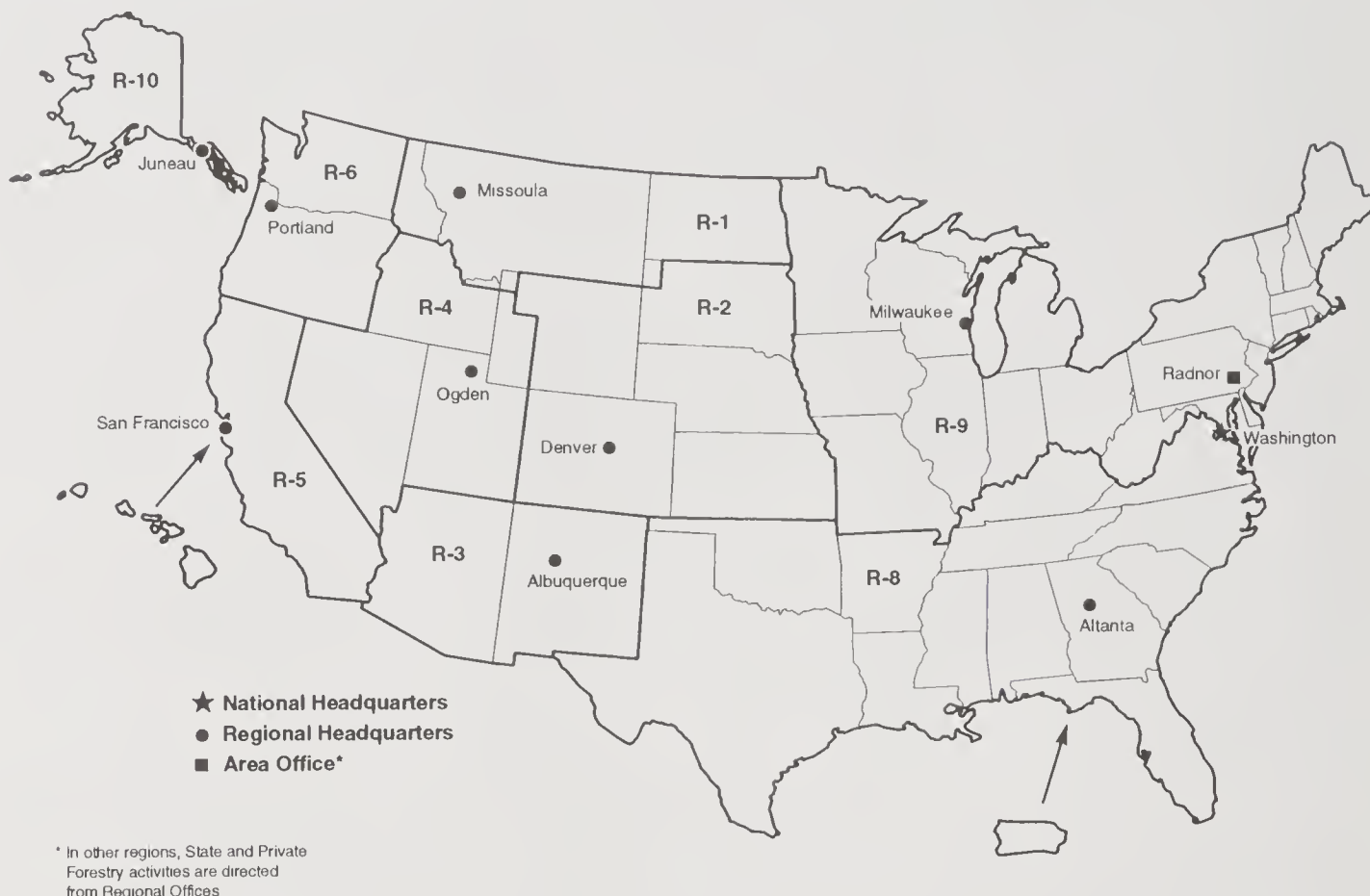
**Facilities reconstructed to meet current legal standards (projects completed):**

Improving health and safety of Forest Service facilities includes replacing, rehabilitating, renovating, and reconstructing facilities to improve access to buildings and restrooms for people with disabilities; update electrical, heating or cooling systems; replace roofs and eliminate hazards related to sewer systems, overcrowded conditions, and fire safety.





## National Forest System Regional Offices State and Private Forestry Area Office\*



### ● Regional Offices

Forest Service, USDA  
Northern Region (R-1)  
Federal Building  
P.O. Box 7669  
Missoula, MT 59807  
406-329-3511

Forest Service, USDA  
Rocky Mountain Region (R-2)  
740 Simms Street  
P.O. Box 25127  
Lakewood, CO 80225  
303-275-5350

Forest Service, USDA  
Southwestern Region (R-3)  
Federal Building  
517 Gold Avenue, SW  
Albuquerque, NM 87102  
505-842-3292

Forest Service, USDA  
Intermountain Region (R-4)  
Federal Building  
324 25th Street  
Ogden, UT 84401  
801-625-5350

Forest Service, USDA  
Pacific Southwest Region (R-5)  
1323 Club Dr.  
Vallejo, CA 94592  
707-562-USFS

Forest Service, USDA  
Pacific Northwest Region (R-6)  
333 SW 1st Avenue)  
P.O. Box 3623  
Portland, OR 97208  
503-326-2971

Forest Service, USDA  
Southern Region (R-8)  
1720 Peachtree Road, NW  
Atlanta, GA 30367  
404-347-2384

Forest Service, USDA  
Eastern Region (R-9)  
310 West Wisconsin Ave.,  
Rm. 500  
Milwaukee, WI 53203  
414-297-3693

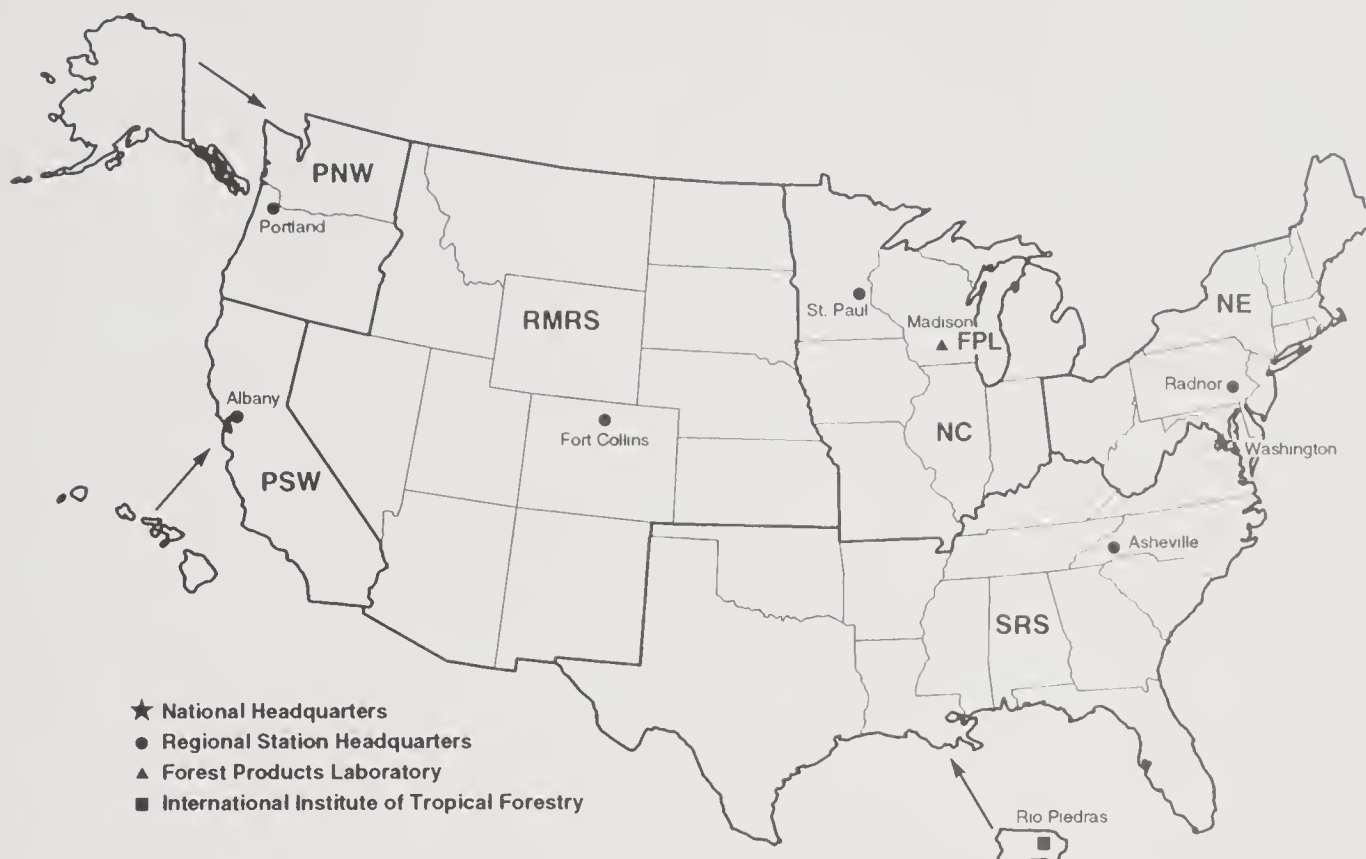
Forest Service, USDA  
Alaska Region (R-10)  
Federal Building  
P.O. Box 21628  
Juneau, AK 99802  
907-586-8863

### ■ Area Office

Forest Service, USDA  
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5 Radnor Corporate Center  
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# Research International Institute of Tropical Forestry

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Southern Research Station (SRS)  
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## ★ National Headquarters

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